JULY

SEMI-TROPIC CALIFORNIA

Devoted to Agriculture, Horticulture, and the Development of Southern California.

LOS ANGELES, CAL.

CARTER & RICE,

PUBLISHERS

VOL. III. 1880. No. 7.

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Respectfully, HARPER, MOORE & CO.

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A Private Hotel on the table lands of the Sierra Madre Mountains, in full view of the famous Orange Orchards of the San Gabriel Valley in Southern California, for the accommodation of parties seeking a mild and healthful climate. It is four miles from the Mission San Gabriel Railroad and Telegraph Station; thirteen miles from Los Angeles. The buildings are entirely new, lighted by gas, and with all the comforts of an Eastern home. For further information

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In different portions of Los Angeles County and City.

Especially upwards of 2000 acres of land well adapted to the growth of vineyards, to be disposed of on shares, i. e., one portion to be cultivated, planted and kept in grape vines for three years, in consideration of conveyance of another portion. Of the lands last referred to a large body is on the Tujunga Ranch, and is irrigable from the Tujunga Creek during the winter and up to the middle of June. Some capital as well as labor is requisite for constructing ditches and clearing off the brush which grows on about two thirds of the land. Any company or colony seeking a location desirable as an investment, or as profitable, healthy and pleasant homes, should look at these. For particulars, apply to

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Semi-Tropic California

AND

SOUTHERN CALIFORNIA HORTICULTURIST.

VOL. III. LOS ANGELES, CAL., JULY, 1880. No. 7.

SEMI-TROPICAL CALIFORNIA

Includes within its limits all those parts of the counties of *Santa Barbara, Ventura, Los Angeles, San Bernardino,* and *San Diego,* which lie between the *Coast* and *Sierra Madre* ranges of mountains and the Pacific Ocean—a strip or belt of land lying along the sea coast, varying from one mile to sixty miles in width, comprising and including the valleys of all the streams which, rising in said mountain ranges, flow southerly and westerly into the sea. The remarkably mild and equable climates (for they are many and various) enjoyed by those favored lands are due to the protection afforded by the lofty mountain ranges above mentioned — rising four to ten thousand feet above the sea—from the cold or hot dessicating blasts fresh from the Arctic regions, which sweep unobstructed through the northern part of the State; but more particularly to the soft and balmy sea breeze from the broad Pacific, which tempers the heat of the summer sun and moderates the cold of winter, giving this favored section the most healthy and equable climate in the world. Notwithstanding the fact that all of the above described belt possesses these characteristics of healthiness and equability of temperature, each valley—and where the valleys are large, each district,—has a climate of its own, modified by its peculiar surroundings and influenced by its location. Those persons who wish a cooler and more bracing air can find just what they want on or near the coast, where the air, fresh from the water, has not been warmed and dried by passing over the land. Those who prefer the breeze to be somewhat drier and warmer can find what they want by locating on lands fifteen to twenty miles from the sea coast, where the air is moist enough without being too moist, and dry enough without being too dry—the perfection of climate for delicate invalids. Those who desire a still warmer and drier climate can find it at the distance of thirty to sixty miles from the coast, where almost all of the moisture has been eliminated from the sea breeze.

As I have already remarked, all of these climates are healthy and equable, but are modified by their surroundings and location. The invalid, in seeking a location where he proposes to make a home, should first test the various climates, and when one has been found which suits his or her peculiarities, then it will be time to select the spot on which to create his future home, where he can surround himself with all of the fruits and luxuries of both the tropics and temperate zones; where, by a judicious selection of varieties, he can have a succession of ripe, luscious fruits fresh from the tree or vine every day in the year. To do this successfully, he must find a place that is *free from frost,* and where he can obtain a *sufficient and certain supply of water for irrigation.* If he secures these two, he can make a home in four or five years that will be equal in point of growth and productiveness to one created in twenty or twenty-five years in any part of the United States east of the Rocky Mountains. We have a great variety of soils—some are more productive and easier to be worked than others; some are leachy, and others retentive of moisture; some are dry, and others naturally moist; but all soils are productive when irrigated. The two important points are, to avoid frost and to secure water; if you have a moderate but certain supply of water, success is certain. Our range of productions is almost practically unlimited, combining all the fruits, cereals, and vegetables of both semi-tropical and temperate zones; the immigrant can devote himself either to the whole range of products, or to specialties. There are plenty of lands to be had in good locations that are adapted to any and all kinds, and other lands that are suited to certain specialties. The home and plantation that I have here supposed to have been erected, will, if it has been judiciously managed, be not only a home, but will also produce a large income—very large in proportion to the amount of the investment.

There is another very important matter for the consideration of the invalid community. In Florida the health-seeker can only remain in safety for a few months, and must then leave for the north, if he would avoid the sultry heats and malarious fevers of the summer—he cannot make a home, but only a temporary stopping place during the winter. Here he creates a home for himself and for his children after him. Our climate is good all of the year, our summer climate is, if anything, better than the winter. Our rainless summers are just the perfection for picnic parties. If a single family or a number of families desire a change, and do not care to visit the fashionable summer resorts, but wish to rusticate to their hearts' content, a drive of a few hours takes them either to the sea shore, where they can pitch their tents, bathe in the salt sea waves, and drink in the bracing ocean breeze; or to the mountain canons, where they can recline on mother earth in the shade of giant oaks, listen to the music of babbling brooks, and inhale the perfume of the piney woods,

"The world forgetting, by the world forgot;"

until, tired of savage nature, they return with fresh zest to the comforts of home and civilization. During our summers the weather is never taken into consideration; good weather is a matter of course.

Persons fond of sporting will find here an immense abundance of wild fowl in the rainy season, quail, rabbits and hares in season, and plenty of deer and bears in the mountains; trout in the streams, and an endless variety of fish in the sea. This is the country for homes. The rich can buy them ready made; the poor can create them, with labor and a little money. The invalid and worn out and broken down man of business can recuperate here, and recover their lost health. And if the question is asked, what are the chances of making money? I reply that, in the culture of oranges, lemons, limes, figs, vines, sugar beets and sugar cane, tobacco, wheat, corn, barley, alfalfa (yielding 15 tons of hay per acre), cattle (both stock and dairy), horses, sheep, hogs, all kinds of poultry, and all of the temperate fruits, all of which are produced in the greatest perfection, men can and men are making money. Living is very cheap, and the necessaries are easily obtained. Steady, industrious men are always in demand, and they can easily save enough from their wages in two or three years' steady work to start for themselves. All of our richest men earned the money for their start by hard work. It is the country for the sick and the well, the rich and the poor.

WM. R. OLIVER.

A great deal of interest is taken by the public-spirited citizens of Southern California in the success of the Horticultural Fair to be held at their Pavilion, and the Sixth District Agricultural Fair to be held at the Agricultural Park, commencing October 18, and continuing six days.

During the existence of the Fairs the hard times have had much to do in curtailing their usefulness. Now that good times have arrived, with our bounteous crops, with our granaries full to overflowing, with our outlook from vineyard and orchard most promising, with a demand for everything at remunerative prices, we will have a revival in our Fair interest as well as every other interest of our county.

SEMI-TROPIC

CALIFORNIA

AND

SOUTHERN CALIFORNIA HORTICULTURIST.

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N. C. CARTER, GEO. RICE, } PUBLISHERS AND PROPRIETORS.

CIRCULATION - - - - 8000.

We print this month a large edition of SEMI-TROPIC CALIFORNIA, and as Mr. Carter goes East he will personally attend to the circulation of them. We have neglected our horticultural readers in Southern California in this number, and have made it up more especially to answer the many questions we are constantly receiving from parties in the East, inquiring about this part of the state. Mr. Carter intends to bring a large party back with him when he returns, and will be happy to give any information regarding this locality, and the way to come here. He will travel through the Eastern and Middle States. Letters to reach him should be addressed Room 2, Nesmith Block, Lowell, Mass.

PREMIUM MAPS.

To each subscriber to the SEMI-TROPIC CALIFORNIA, we will give a large, (size 20 x 24), handsomely engraved and printed map of California and Nevada, geographically correct, and folded in a flexible cover.

Sent to any address post paid, for $1.50 per year.

NOT PHYLLOXERA.—A gentleman from this County brought in a grape trunk, over twenty-five years old, that had been cut off by some insect. There was considerable sensation over it, as it had been pronounced the dreaded Phylloxera. We pronounce it a borer—the species not known as the insect itself was not to be found in the vine presented for inspection.

That it was not Phylloxera is certain. The following symptoms will determine whether or not a vine has been attacked by the Phylloxera; first a fading of color on the leaves, second the branches no longer hang down, but stand upright, shortened and stiff with a scared and yellow foliage early in the fall; third, the vine is entirely crippled and shorn: looking like old willow stumps, and not cut off as in the above instance, but requires a horse to pull it up.

HORTICULTURAL FAIR.

A NEW DEPARTURE.

The new organization of the Southern California Horticultural Society gives confidence to all our citizens. All the old expenses and extravagances have been stopped, and instead of paying out $200 per month during the year, as formerly, they do not now pay out a single cent.

The old premium list and floating indebtedness has been settled, and the Society are in fine trim for a "boom" at their Fair this fall.

The following is the management and our citizens will recognize in them men of ability and integrity, in whose hands the society's business will be economicaly and energetically managed:

J. DE BARTH SHORB, - - President.
H. K. W. BENT, - Vice President.
E. F. SPENCE, - - - Treasurer.
CAPT. C. E. THOM,
T. C. SEVEHANCE,
GEN. J. H. SHIELDS,
DR. O. H. CONDER,
J. F. CHANE,
GEORGE RICE, - - - Secretary.

By doing away with the expensive management of former years, the Board of Directors are enabled to offer a more liberal premium list and have the money that was otherwise used for the prompt payment of premiums.

The Premium list will be large and ample and Prompt Payment guaranteed. We bespeak the hearty co-operation of every citizen of Southern California, who have an interest the welfare of Horticulture and Agriculture in semi-tropic California.

SPECIAL PREMIUMS.

A number of gentlemen have generously offered large premiums to be awarded at the Horticultural Exposition in October. We would give a list of the gentlemen who have made these offers, the amounts and their object., but defer until our next issue, when we can give the entire list—others intending to give premiums. The object is commendable and is worthy of emulation.

A few of the special premiums are as follows:

Best sack of Wheat as it runs from the threshing machine	$25 00
Best Display of California Fruit	25 00
Best Dairy Display	25 00
Best Grape "	25 00
Best Display of Native Wine	25 00
Best Honey—aggregate $50 00,	75 00
Best Vegetable Display	25 00
Best Display of Flowers in Pots	25 00
Best Bread—aggregate	25 00
Best Sugar-beet Sugar, local production	Gold Medal
Best Needle-work	Elegant Silverware
Best Baby	Carriage worth $25 00

And several others yet to be arranged, of which we will give due notice and publish in our catalogue, copies of which will be sent to any address free.

BEN. BUTLER IN LOS ANGELES.

In a speech from the veranda of the Cosmopolitan Hotel, Mr. Butler said of Southern California:

"Here, too, we have every variety of climate, and it needs no very great extent of territory to give that variety on this coast. Within three hours the car I was riding in was covered with icicles, and a terrible frost hung from the snow sheds; and then I was surrounded by the roses of Sacramento. You have only to go forty or fifty miles from where is an eternal frost before you enter a climate so equable, so mild, and so health-giving, that some of my friends whose lives we had almost despaired of in New England, and found health and strength—and without health all is useless in this world—have found health and strength here among you. The equability of your climate is great. We have no days like this in New England that we had to day, or like we had last week, but climate twenty-eight to thirty, and perhaps forty degrees better than this; and in the midst of the winter the thermometer twenty-eight to thirty degrees below zero. A large portion of New England is subject to great changes like this. But why should I, a stranger, speak to you of what you know so much better than I do? The air you breathe and the water you drink are blessings unappreciated, because you have them all the time, but to me they seem to be very beautiful."

PARING PEACHES.

First, take an iron pot, place it on the stove with water in it, put in a box of concentrated lye, let it dissolve in the hot water until it is strong enough to cut the skins, then remove the lye—you can tell by dropping in a few peaches: take them out and throw them into a tub of cold water, rinse them thoroughly, and wipe off with cloth, and your peaches will have the skin removed, still retaining its red cheek.

You may hold up your hands in horror at the idea of using lye, but if you try it once you will always use it, as it is quicker and better than done by knife. We have used the above method for twelve years.—*Fruit Recorder.*

THE Gold Discovery of California was made on the 19th of January, 1848, a month before the treaty of Guadalupe Hidalgo was signed, and five months and a half before peace was finally proclaimed and the American title to California acknowledged by Mexico. In June the whole territory was excited, and on the 20th of September the first public notice of the discovery printed in the Atlantic States, the Baltimore Sun, attracting little attention. Towards Fall shipments of gold dust and more reliable words reached the East, and, in the year following, '49, the excitement ran high and many an adventure was made by the sturdy pioneers to reach the golden land.

We will answer all communications addressed to us in reference to California through this column. We will answer regular subscribers by personal letter, when stamp is inclosed for postage.

G. M. G., Chillicothe, O.—Some of your questions have been answered in former issues, but, by reading this number of the Semi-Tropic, you will find them all answered again in a general way as numerous other inquiries also are.

Subscriber, Orange.—"Ensilage" is the name of a process of preserving fodder and other feed cut in a green state. The inventor is a Frenchman, by name, M. Auguste Goffard. A trench about ten feet square is dug, walled with brick and cement, to be made air-tight and free from moisture, and called a silas. The fodder is compactly laid, and the whole covered with earth to a sufficient depth to prevent freezing. Of course we have no use for "ensilage" in California, where we can raise green fodder, alfalfa and grass all the year round.

HOMESTEADS.

The question has been asked us so often: Are there any *good* homestead lands in Southern California? We have had an experienced land man at work in the United States Land Office, this city, for this district drawing off and mapping all the vacant lands in Southern California, visiting them and noting down their value. We are now prepared to answer understandingly. Our answer is—that a great deal of Government land is open for settlement. Much of these lands are only fit for pasturage, and some of them not even for that. Some are very valuable, and will make as good ranches for the growth of the vine, orange, lemon and grain as any in Southern California.

These vacant lands we have the numbers of lie in San Diego, San Bernardino, and Los Angeles counties.

In one county is a large tract of A 1 land, open for homestead or pre-emption, that we would like to see a colony occupy. There are several thousand acres of good land, well adapted to the growing of grapes, oranges, wheat, barley, etc.; climate as fine as silk; water can be easily developed by co-operation of a colony or company. Homes of peace and plenty can be made by those who will bring at least $1,000 in money and strong arms and willing hearts to work and wait until the vines begin to produce their luscious clusters—to wait until the orange brings wealth with its golden fruit. We name the colony in advance *Semi-Tropic California Colony*, and will show the spot we talk about to those who mean business, and help them all we can to locate, and not charge a cent.

We want to see this magnificent country settled up with industrious, hard-working men and women.

Men who can bring out less than $1,000 to go on a homestead; men with and less than $2,500 to buy a small place nearer town, school and church; men with $5,000 and upwards to improve vineyards and orange orchards, and make for themselves comfortable and happy homes are wanted.

Men with brains, money and muscle are wanted to come and settle in this delightful climate of ours, where a home can be made not excelled in any other part of the world.

THE TWO FAIRS.

Everybody and their neighbors can go to see the two fairs in this city commencing October 18 and continuing six days.

The Horticultural and Agricultural Fairs will be held the same week. The time of year is pleasant; the nights moonlight, and everybody should take a week for enjoying the rare exhibits to be shown this fall.

The managements of the two fairs have been active and energetic, and will offer attractions, at the coming fairs that will far exceed any previous year.

The Premium Lists are larger, with a guarantee given that all premiums will be paid in full and promptly at the close of the fair.

Never in the history of Southern California have the crops been more beautiful, nor the prospects brighter for an immense yield of fruits. We are on the eve of great prosperity, and the world looks to us for our supplies. There is no better way to advertise our products, our lands, our climate, than in exhibiting the best of everything we produce at our annual fairs. It is a duty that every citizen owes his County, his locality, his neighbor, his city of commerce and himself, to bring to his County, District, or State fairs, the best of everything he can produce.

Not for the purpose only of getting the highest awards, for every one can not have the best.

But, by competition, you learn the defective points to guard against and the good points to adopt in the future.

Not only that, but the mere exhibiting and competition stimulates every one to put forth renewed efforts, and those efforts redound to the benefit of the exhibitor so inspired.

The social benefits derived by gathering together at our fairs is one of the great levers to our capabilities as a self governing people. It has been said of England, that without her fairs she would go back into despotism, and barbarism.

Every man should provide for taking his family to the fairs in which his section of the State is interested, as a duty, as a pleasure and as a paying business.

Mr. C. E. Watkins of San Francisco, the pioneer photographer of California, has spent about two months in this county and Arizona, taking views. We shall have several of them engraved for our paper, and Mr. Carter is also having a large number made for the pre-emption, to exhibit East. Mr. Watkin's place of business is at 427 Montgomery Street.

SEMI-TROPIC SANTA BARBARA COUNTY, AND WHAT SHALL BE DONE WITH IT.

THERE has been for past two years a culmination of experiments, as to what shall be done with this Semi Tropical land to get the most out of its peculiar location, especially the portion below Point Conception, so exceptionally protected from frost and subject to an extreme heat, so that irrigation is proved to be not a necessity, except for citrus fruits in their earlier stages.

For the past ten years various experiments have been tried, and with as varying success. Bumie Speculating in corner lots, Sorghum, Sugar Beets, Sugar Cane, boring for oil, Sheep and Sheep Ranges, Almonds, Olives, Walnuts, Raisin Grapes, Peanuts, Temperate Zone Fruits, Citrus Fruits, Perfumery Plants. All these have been tried, some in larger, some in smaller quantities; now the Santa Barbara Horticultural Society are gathering in results eliminating unproductive factors, and looking for that valuable unknown quantity, "What Pays."

A large proportion of our agriculturists have in the mean time been solving a nearer problem, "daily bread and how to get it," and waving fields of Barley, Wheat and Corn, greet the observer on all sides, together with Potatoes and Beans without limit, much beyond local demands. Then came low prices and high transportation, and with it a complete disgust with farming and its results, and those only who were out of debt and determined to remain so, could stand this condition of things, out of this grew a deeper interest in some products worth enough to pay transportation and leave a margin, and it becomes a question of highest vitality to this County to make this discovery. There has been a strange indisposition to plant slow growing fruits, notably Walnuts, Olives, etc. The average minds, dislike waiting and consequently, are now overwhelmed by the results of their farsighted neighbors' success, who are reaping returns from their patient waiting. Noble young Walnuts of of ten years and over are giving from fifty to one hundred pounds of nuts, shelling themselves and nothing of expense or trouble required save sacking them for market.

Some of our most careful producers give them a slight bleaching before marketing, thus adding to their attractiveness. This product is largely increased with added years, and the market price ranging from ten to fifteen cents per pound, usually from twelve to fifteen cents, since the grading of Chile walnuts, at 7 to 8 cts per pound.

I have this season seen at "Elwood," Mr Cooper's beautiful farm, Walnuts, six years from the transplanting (two years of age then) bearing a very respectable preliminary crop, the average can only be told later in the season.

These trees had all the land given them, no crops had been raised between them, and therefore this early bearing.

The trimming had been made a careful study, all the branches tending downward, those from buds in the under side of the branch, had been taken off; so in future no weight of nuts can injure the tree.

The Almond is bearing in most localities here abundantly this season, but proves an uncertain bearer, and therefore not a wholly desirable crop, though when it does bear heavily it makes the "almonds honorable." Many are being grafted with Apricot, Nectarine, Peach, as well as Prunes.

Next in order, comes the Olive, if indeed it should not have the first place, the only objection to it has been, it will not bear abuse, and insists upon high culture, semi-yearly cleaning of the trunk with whale oil soap-suds, with a very little carbolic acid. This treatment if carefully followed up will annihilate the scale-bug the worst enemy of the Olive, as the forlorn uncared for specimens about the country testify.

That this condition of things is unnecessary is now wholly demonstrated, and where a refractory case or a neglected tree is to be reduced to order, the top is sawed off, a coat of white-wash made very thick, put on in the spring, and when the winter rains have washed off the coating and a new top comes out healthy and fresh, there is a tree as good as new, and in fine bearing. This is not theory, but actual practice among our best growers, a beheaded orchard, nearly dead of neglect is now a beautiful sight and bending down with fruit in Montecito, a suburb of Santa Barbara.

Mr. Cooper's estimate of his fruit this season, from Olive trees six years from the transplanting (2 years of age then) is from one to two gallons of oil per tree selling readily at five dollars per gallon. San Francisco will probably exhaust the Southern California supply of Olive oil, the only pure oil known to commerce, as the Cargoes of Lard oil, sold to manufacturers of the former article fully proves. At ten years of age, the Olive is expected, to produce from three to four times that amount, this expectation being based on isolated trees of that age receiving only moderate care.

To keep them in perfect health requires only that the scale-bug be kept away, and the ground kept free from weeds and pulverized throughly. This result can be accomplished by using the cultivator during the fall and winter, three or four times, and ploughing in March, or at the close of the rainy season. The best orchard I have seen this season, received this attention and was wholly free from weeds. Apparently all soils are alike to it, I have seen as fine trees on adobe hill sides as upon the richest bottom land, and as full of fruit. Now comes in from our list the next fruit in importance in the problem, of "What Pays." "The Apricot." Last season the hardest veil of all the year came from the Apricot raisers, and Apricot pebbles became the "bete noir" of housekeepers. The market was over stocked and it did not pay to send to San Francisco, but the assurance most welcome from our reliable Townsmen, Messrs Sheffield and Dimmick, that a cannery would be in operation in time for this season's fruit, was a relief indeed.

In a fortnight the Apricots and Nectarines will be ready, the cans have been in process of manufacture for weeks, the crop being two weeks late this season.

The nectarine is much below the demand the San Jose canners having made liberal offers for all that can be spared from here, large orders pouring into the State from India, Japan, China, Australia and Europe, for these two fruits specially. This thermal belt is specially adapted to their culture, second to none in the State, only Santa Clara Valley and a few sheltered Valleys North, answering for their culture, and some favored spots Southward. Therefore considering the early date of their bearing, three years of age, and their reliability (certain varieties), and the unusual demand, foreign and otherwise, those fruits deserve a large place, in the list of paying productions, price offered being from 2½ to 2½ cents. Prunes, in the fine young orchard of Mr. Knapp, of Carpenteria, are giving excellent promise, and his experiment of fifteen hundred trees of the Petit Prune d'Agen, variety, is worthy of emulation. Pears, Peaches, Apples, Quinces, have passed the stage of experiment and are coming on in abundance. Figs are on their native heath, and were almost the only fruit found here by the Americans, save mission grapes.

Of this latter fruit, on the uplands, all varieties are a success, and the Muscat and Gordo Blanco, are being put out for raisin grapes, and have hardly passed beyond the experimental phase, though some raisins were made last year, and of an excellent quality. The Hillside lands with South-East exposure, afford, a large opportunity for profitable investment, for Grapes and Olives. Wine has been made here for years, Claret, Angelica, and other varieties, excellent in quality and at the present prices remunerative.

Another solution to our problem may find answer in the following paragraph. A company of gentlemen from Massachusetts, of whose number one is now a resident of France, purchased last season a tract of 110 acres of land near town, finely watered, for the growth and propagation of plants suitable for use in the preparation of perfumery; 6,000 Bitter Orange trees have been planted this spring, a large supply of Provence roses sent from France of the variety used there for Attar of Rose. Lavendula Vera, Jasminum Grandiflorum, Tuberosa, English Violets, Geraniums, and other varieties are also planted. These are under fine cultivation and are being vigorously pressed forward to a growth sufficient to the commencement of the real work. Another year is allowed by the company before remunerative returns can be expected. This opens a new field hitherto untried and unnoticed, save that everybody knows, where flowers grow so profusely, that they might be utilized in some way, the climate being so much more favorable than Southern France, unhindered by snow and frost, and a supply of some varieties of blooms at all seasons, a more desirable opening for enterprise and capital can scarcely be found; and many localities equally good are obtainable for the purpose. Society, Schools, Churches, are not among the neglected things with us but in advance of our real needs. The Eastern States have given us of their best, for which we desire to return thanks, with the request that they will send us more of the same kind; we do not ask for better, and we promise all a warm welcome, and make no charge for the wisdom gained by years of experiments, and multitudinous blunders and failures, consequent upon total ignorance of the possibilities, of this section. The spies sent as the grapes of Eschol, from this promised land, but we have desired more, and mean to have it. It is a common remark, "had I known ten years ago what I know now, I could have been a rich man to day." Also a kindred remark, "There is the least possible excuse for poverty in this country of any in the world, if only common sense is used."

The sugar growing productions have succeeded so well that we are only waiting the results of experiments this fall with the Sugar Mills south of us, if they prove remunerative, Santa Barbara County will follow suit. Of small fruits, Strawberries, Blackberries, Raspberries are raised in abundance; in the winter the former berry is sent to San Francisco and commands a dollar a pint and often more, though of course at that season the crop is a small one, but in greater or lesser quantities, are in market eight months in the year.

Mrs. N. W. Winton, Sec'y.
Horticultural Society, Santa Barbara, Cal.

THE CULTURE OF THE ROSE.

Among other most excellent articles in the June number of *Scribner* is the following on the propagation of roses, which is both timely and instructive:

Every rose will not come from the slip. Of the great divisions into which the rose family is separated, viz.: the damask, the noisette, and the tea, the last two may be propagated with more or less readiness from the slip, or by budding; the first only by dividing the roots, and planting the seed, which latter method is resorted to, however, only when it is desired to obtain new varieties. The best season for taking rose slips is in June, just after the profuse bloom of early Summer is over, although a person who knows how to cut a slip may find good cuttings throughout the warm months. Judgment and discernment are needed for the selection at all seasons. I know a gentle lady who sent her friends immense armfuls of boughs with hardly a real cutting upon them.

Mr. Harrison's apricot orchard at Santa Barbara will yield him $1,000 per acre this year. His trees are now only five years old. The Colonel's almond orchard of 38,000 trees looks exceedingly well, and a large crop will be gathered, paying a handsome profit.

THE UNIVERSITY OF SOUTHERN CALIFORNIA.

In June, 1879, three of our leading citizens, Ex-Governor Downey, I. W. Hellman and O. W. Childs, gave over three hundred city lots in trust to A. M. Hough, J. P. Widney, E. F. Spence, M. M. Bovard, G. D. Compton and R. M. Widney, to sell, and to invest the proceeds in interest-bearing securities, for an endowment fund for the establishment of this University. The first 30 lots will be sold at $200 dollars each; the proceeds to be used in erecting the first building. After that, all lots will be sold at $300 each; $50 cash, balance in five annual payments, with 10 per cent. interest.

Messrs. Boggs & Ripley, architects, and also by Kyson & Hennessey, architects. The plan adopted was prepared and proposed by Judge Whitney, one of the trustees, and was adopted for the first building for the reasons above stated.

This institution is started on the basis of *no debts*; cash must be on hand before any work is ordered. The deed of trust is carefully drawn, so as to prevent anything but cash transactions by the trustees.

So great is the confidence of the community in the safe, financial manner in which it is organized, that the citizens with readiness purchased lots, and made donations of land and cash to its endowment fund.

This first building will be erected during this season, and the educational department put in operation at once.

The University will be incorporated under the law of this State. A full university course of studies will be adopted, equal in grade and thoroughness to any in the United States. Degrees will be conferred, in course, on all graduates.

The men in charge of this are men of thorough education. They know what is needed; and they intend to found an institution that will furnish to the youth of this part of the State an education that will fit them to enter the arena, and contest for the prizes of life with the graduates of older institutions.

Citizens of Los Angeles will no longer have to send their children away from home influences to be educated. Neither will parents be compelled to break up their business and go to other localities, for the purpose of giving a high education to their children. The business effect of this enterprise will cause a difference of many thousands of dollars annually to this place, in money retained here, and money which will be sent from outside places with students from abroad.

There is probably no place in the world where a student can study to better advantage than here. The climate is neither cold nor enervatingly warm. The air is invigorating; it is a constant mental tonic.

University of Southern California, Los Angeles, California.

We present to our readers in this issue the plan for the first building of the new University. The building is 50 feet square, containing the arrangement of rooms shown in the plan. The ceilings will be 16ft. in the clear, in both stories. Under the deed of trust creating this institution, which was printed in full in our last number, the trustees are required to use the first $5,000 received from the sale of lots to erect the first building.

The present plan was adopted for the reason that it gave the largest area of rooms for the $5,000.

Several other very fine plans, of great architectural beauty, were presented by

The mind will act here with at least ten per cent. more vigor and effect than in other places. The vital forces are not consumed in a struggle with cold or heat, but are left to act with full force upon the mind. We anticipate that in the future there will be attained higher and more brilliant literary and scientific results than have ever been entertained in any other land.

Mr. N. C. Carter goes East July 7th, in the interest of emigration to Southern California. He will illustrate this section with the stereopticon and persons wishing to see him or correspond will address him at Room 2, Nesmith Block, Lowell, Mass.

The Dairy.

BUTTER DAIRYING IN SOUTHERN CALIFORNIA.

By General J. H. Shields.

Los Angeles, June, 1880.

General J. H. Shields,

Dear Sir:—Inquiries about the Dairy Industry and resources of our section are too frequent and detailed, to be conveniently answered in manuscript letters.

Your experiences as an agriculturist, within our dairy region, qualify you to write a general answer to these inquiries, which, if published, would favor the inquirer, and relieve those to whom the inquiries are directed.

We merely make the suggestion, trusting to your well known public spirit for the consequences.

R. M. Widney, J. E. Hollenbeck,
John G. Downey, Phineas Banning,
George Stoneman.

Florence, Cal., July, 1880.

Hon. R. M. Widney, J. E. Hollenbeck Esq., Governor John G. Downey, General Phineas Banning, General George Stoneman:

Gentlemen: Honored by your suggestion, I act upon it less reluctantly as upon turning to my file, my conscience is quickened by almost forgotten, and unanswered inquiries about dairying in Southern California. Respectfully,

John H. Shields.

Without repeating the questions asked about our dairy resources, and the present status of the dairy industry of Southern California, I shall proceed to a statement of such facts, as amount to answers to the various inquiries. I shall indulge but little, if at all, in opinion, conjecture, forecasting, argument, or conclusion: shall simply state facts. If, in spite of extra caution, thrice brushed away towards lines, unbidden, re-suffuse a fact surface, it must be accepted, as irrepressible, contour-deep truth, in its own natural colors. If the persistently tabooed boom, so much as whisper among the facts, the facts must bear the responsibility. I shall not allege facts indefinitely of the whole third of a State, leaving the searcher after truth, as on a boundless expanse, without chart or compass, but shall direct the searcher, and raise a cloud of witnesses, by accurately descriptive terms of date, spot and person.

PERSONAL.

F. J. Barretto, Esq., favorably known in the East, emigrated from his home in New York City, in October, 1876, and, with his family, came directly to San Francisco, and after a brief sojourn at the Palace Hotel, he came on to Los Angeles. Mr. Barretto gave up excellent associations in New York, to seek a home in far away California, trusting the fame of the genial climate. Within Mr. Barretto's family, an illustration of the remedial effects of the climate is the happy sequel to the faith, which moved him to cross the continent.

FOREST GROVE JERSEY FARM.

Soon after Mr. Barretto's arrival in Los Angeles, he bought what is now known as "Forest Grove Jersey Farm." This farm is situated about nine miles South-east of Los Angeles City, two miles West of Downey City, and near the Anaheim Branch of the S. P. Railroad. The Eastern boundary of the farm is the San Gabriel River, a perennial stream, beautiful, as the flows from Alleghany cascades, and whose snowy sands, in which may be found the faint color of gold, flow as the waters flow from the Golden Sierras. Forest Grove Jersey Farm is Mr. Barretto's home.

IMPORTATION OF JERSEY THOROUGH-BREDS.

Before leaving the East, Mr. Barretto selected and bought, regardless of expense, a car-load of thorough-bred Jersey cattle. These are all registered in the herd book, and were selected from different herds, between which there had been no crossing. Unexcelled butter qualities governed the selection. Among Mr. Barretto's car-load, was the heifer, now his cow Chartruse, (3699), whose mother Chatelaine (1916), was sired by Tancred (501), dam Lady Ella (1146). Chatelaine's butter capacity was estimated at 634 lb per annum. Mr. Barretto's Chartruse, after her second calf, for several months, yielded by actual weight thirteen pounds of butter per week, on alfalfa and wildgrass of Forest Grove Jersey Farm. Also, in the same car-load, were two bulls and three heifers, thorough-bred, lineal descendants of Col. R. M. Hoe's Jersey cow "Alphea," as famous among Jerseys, as Col. Hoe's invention is among printing presses. It is believed, that Alphea never had an equal, either in America or elsewhere. Alphea is fairly credited with yielding from 20 to 22 quarts of milk per day, which, owing to the excessive richness of Jersey milk, yielded at the rate of from 20 to 22 pounds of butter per week. One of Alphea's granddaughters yielded 22lb per week, for a while, and 20lb, months after calving. The two thorough-bred Jersey heifers brought out from the East by Mr. Barretto, were all in calf, each by a different, thorough-bred, eastern Jersey bull.

INCREASE OF THE JERSEY HERD.

The first calf was dropped on the 17th of December 1876, and, on the 1st of July 1880, the pure Jerseys had increased from two bulls and two heifers, to 21 males and 30 females. It is plain, that the Jersey herd has increased 350 per cent in 3½ years.

PRACTICAL MANAGEMENT.

The heifers are so bred, that they come in as milkers, at the age of about two years. The calves are weaned at the age of three days. They are brought up by hand. Have daily allowances of fresh and skim milk. Are tethered on young, and tender alfalfa, at which they nibble with great pleasure and benefit. The bulls are constantly stalled. Are not allowed to run with the cows. The bulls are fed, almost exclusively, on alfalfa hay. The cows run on the common pastures, among the willows of the lowlands, along the San Gabriel River, as long as the natural pasture continues green, during which time, the wild pasture is their only feed. About July, when the wild or natural pastures become dry, the cows are fed, at night, in the corrals, with wilted alfalfa; that is, alfalfa cut one day and fed the next. Unless cattle have constant, frequent access to growing alfalfa, there is some danger of bloating, which is avoided by a day's wilting. Still later in the season, when the dried, wild feed is about consumed, a little meal (though not by any means indispensable) is allowed daily, in addition to the alfalfa. The meal is a mixture of Indian corn and barley, ground together. In lieu of meal, pumpkins or beets are given in their season. The pumpkin is in, from the last of Summer to the first of Spring. Beets are in all the year, and are good feed for a cow. Mr. Barretto considers wilted alfalfa, with pumpkins or with green corn, the best feed for making butter.

In wet weather, his cows never leave the corrals. The corrals are provided with rain proof sheds, and so ditched around, that no water comes in. In this warm climate, Mr. Barretto thinks, that cattle do better in dry open sheds than in stables. That milk cows ought never to be exposed to our chilling sunstorms. That they ought always to have shelter, and a dry place to lie down upon.

BUTTER-YIELD, PERPETUAL MILK-FLOW, REST, FOOD, MAXIMUM RESULTS, AND MINIMUM COST.

Some of Mr. Barretto's thorough-bred Jerseys yield from 12 to 14lb of butter per week, for from two to three months after calving. The entire band of Jersey milkers average a pound of butter a day, for ten months together. Few of the cows are dry more than a month out of the year. Some of the cows have not been dry since the first calf, now about three years. In order to rest, and to spring bag, the cow ought to remain dry from four to six weeks.

The climate, and the long period of green food, of pumpkins and beets in the cooler months, and of green alfalfa in the driest and also in the coldest months, all combine to early calving, sound constitutions, longevity, perpetual flow of milk, maximum per centage of cream, and minimum cost of growing milk and making butter.

QUALITY, DEMAND, PRICE.

The butter from the Jersey herd at Forest Grove Farm is of a deep yellow color, hard, close grained and waxy. It retains its consistency in the warmest weather.

In harmony with the experience East, Mr. Barretto realizes a more active and steady demand and higher prices for his Jersey Butter than his neighbors obtain for the butter of other varieties of cattle.

ANSWERS TO OBJECTIONS.

One objects to the Jersey because it is too small for profitable beef making. Mr. Barretto replies that he is not breeding for beef, but for butter. That, in six, seven or eight years, the Jersey will return more clear money than any other cow.

That, if the Jersey herds turn out a smaller tonnage of beef, they consume a smaller tonnage of food. Chatabine, weighing 1,000 pounds, the mother of Mr. Barretto's Chartreuse, yielded 9,289½ lb milk in 324 days and 393¾ lb more than ten times her weight in 365 days. Mr. Barretto's cows, fed on alfalfa, beets and pumpkins, yield from 20 to 30 pounds of milk per day, or about ten times their weight per annum. The cream test is from 25 to 34 per cent. About 1-15 of the milk is butter, or about 15 pounds of milk make one pound of butter. Mr. Barretto's Jersey cows weigh from 800 to 1,000 pounds each. The best of them yield about 6-10 of their weight in butter each year. Mr. Barretto has year-round engagements for his butter, at thirty cents a pound. This is only about ⅓ of the price of Jersey, Philadelphia Print. Mr. Barretto gets seven crops of alfalfa hay annually, 1½ tons per acre per mowing, or 10½ tons per acre per annum, from his best land. The hay of one best acre, and the beets of ½ acre will keep two Jerseys a year, in full flow of milk. Mr. Barretto thinks that he ought not to envy the owner of Durhams, nor does he think that the beef grower ought to envy the owner of Jerseys.

It is now less difficult to understand why, Honey drop (1,032), 3 years old, and the full sister of Mr. Barretto's Lady Ethel, sold, in New York, on the 25th May, 1880, for $605. And why, on the same day, Eurolus, a Jupiter Bull calf, and cousin of the Alpheas, who composed ⅓ of Mr Barretto's original herd, sold for $600. And why, another Jupiter descendant, sold for $1,400.

COMPARATIVE CAPACITIES FOR HOLDING IT.

There is a part of Forest Grove Jersey Farm, which consists of almost pure sand. This has been abandoned to stunted bushes, cactus, sallgrass, alkali weeds, and wire grass. Here pasture, and decidedly rough it, the young stock cattle. Here, I had a rare opportunity of witnessing the comparative capacities for roughing it, by Jerseys, Shorthorns, and crosses with Spanish Longhorns; for all these varieties pastured there together. The Jerseys were in excellent condition; the shorthorns next; the crosses with Longhorns next. I will not even conjecture what would have been the relative condition of a genuine Spanish Longhorn, which, on Florida wire grass, is the "Sorriest" cow, since Thurlow's seven lean kine.

SCALE OF POINTS.

Mr. Barretto's herd of thorough-bred Jerseys is a valuable study of the points developed in this variety. By studying this herd, one may learn how to select a milk cow of any variety, for the more the points of a cow of any variety are like the points of the Jersey, the more apt is that cow to be a good milker. Withal, the study of Mr. Barretto's herd discloses a definite, and entirely assuring answer to the Eastern inquiry, as to how the Jersey, in semi-tropical California, maintains in standard development, the scale of points adopted by the "American Jersey Cattle Club." I have believed, upon general principles, that our genial but in no sense oppressive climate, freedom from insect sow-pests, perennial green alfalfa (a powerfull stimulant of lacteal secretions), would gradually, from generation to generation, enlarge the Jersey, increase the flow of milk, and improve some other points, without expense to any point. In this connection, reminded Mr. Barretto of the Durham proportions of some of the udders in his herd of Jerseys, especially that of the Beauty of Ipswich. While Mr. Barretto admitted the logic of the proposition, remarked that the flow of milk, in his herd of Jerseys was not greater in the ratio, in which the size of the udder was greater.

That our semi-tropical climate does not lower the points, either of Southern California bred Jersey thorough breds, or of their imported progenitors, may be ascertained with precision, by examining Mr. Barretto's herd, tabulating the points, annexing the counts, comparing with like tabulations of the best Eastern herd, and by a reference of all the tables to the following scale of points of the Jersey, adopted under an authority, now deferred to throughout the United States.

POINTS.		COUNTS.
1	Head small, lean and rather long	2
2	Face dished, broad between the eyes, and narrow between the horns	1
3	Muzzle dark and encircled by a light color	1
4	Eyes full and placid	1
5	Horns small, crumpled and amber color	3
6	Ears small and thin	1
7	Neck straight, thin, rather long, with clean throat, and not heavy at the shoulders	4
8	Shoulders sloping and lean, with as lean, breast neither deficient nor heavy	3
9	Back level to setting on of tail, and broad across the loins	4
10	Barrel hooped, broad and deep at the flank	8
11	Hips wide apart, and fine in the bone, rump long and broad	4
12	Thighs long, thin and wide apart, with legs standing square and not to cross in walking	4
13	Legs short, small below the knees, hoofs small	3
14	Tail fine, reaching the hocks, with good switch	3
15	Skin thin and mellow, with fine soft hair	4
16	Color of hide, when hair is white, an udder and inside of ears yellow	6
17	Fore udder full in form, and reaching well forward	5
18	Hind udder full in form, and well up behind	8
19	Udder free from long hairs, and not fleshy	5
20	Teats rather long, wide apart and equally placed	6
21	Milk veins prominent	5
22	Escutcheon high and broad, and full on thighs	8
23	Disposition quiet, and good natured,	7
24	General appearance rather bony than fleshy	6
	Perfection	100

In judging bulls omit, 17, 18, 19, 20 and 21

PRIZE JERSEYS.

To Mr. Barretto, for his Jerseys, were awarded five first and three second premiums at the Golden Gate Fair, Oakland, Cal.; four first and two second premiums, at the State Fair, Sacramento; eight first and two second premiums, at the San Joaquin Valley Fair, Stockton; and all the premiums at the Los Angeles Fair.

DIFFERENCE OF OPINION.

Not only Jerseys, but Short-horns attain perfection in Semi-tropical California. The Jersey, by no means, has universal preference. Other varieties number hosts of advocates among Californians. The truth is, each variety transcends the others, in some respects, for some purposes, and for some localities.

CONCENTRATED FODDER.

In order to the better understanding of the intimations, which imply a sort of steel like concentration of nutrition, in alfalfa, it is here added, that Mr. Barretto's uncommonly close made Berkshires, descended from Col. R. M. Hoe's importations, after weaning, are grazed on alfalfa, within portable fences, and, with no other food than alfalfa, grow rapidly, and finally, with pumpkins, beets or grain, for a month or two, are finished off for market.

Others, having the Essex, or other closely built hog, pursue the same course. Some grow their hogs on dry alfalfa hay. Alfalfa is perhaps not so much richer as more digestible than other grass.

It is explained, that Mr. Barretto's herd was not chosen as the source of facts because there are no other sources of such facts, but because his is the important private creamery nearest to my home. I have fuller personal knowledge of his herd than of others. The Jersey is not the only profitable dairy variety here.

In the next letter, will treat of our cheese-factory interests.

STORMS AND TORNADOES go crashing and tearing away the life-time work of our Eastern friends. Every few days comes the dreadful news of a terrible cyclone devastating a vast extent of country, destroying forests, houses in the country, laying entire towns in fragments with great loss of life. With us storms are unknown, and life and property are secure. To the timid that so dread the fearful thunder and lightning storms of the East, a perfect security is to be found in living here—no thunder is known to the natives, no lightning to destroy life and property.

THE vastness of our resources will be fully shown at the Horticultural Exposition in October. No other section of country in this side land of ours can show so great a variety of products as Southern California. Every citizen should interest him or herself in getting something ready for our Exposition. The amount of good resulting in a friendly competition, a general coming together, and in seeing what our neighbors are doing, is incalculable. GET READY!

SAN DIEGO—CITY AND COUNTY.

BY DOUGLAS GUNN, EDITOR OF THE SAN DIEGO "UNION."

THE Bay of San Diego was discovered in the year 1542 by Juan Rodriguez Cabrillo, a Portuguese navigator in the service of Spain. The present name of the harbor was given by Sebastian Vizcaino, who surveyed it in November, 1602. On the 16th day of July, 1769, the first Catholic Mission in Alta (upper) California was founded here by the Father Francis Junipero Serra, who had arrived here with a party overland from Lower California on July 1st. The foundation of the first mission building was laid on the point of the hill overlooking the river where the "Old Town" of San Diego is now situated. This is known as Presidio Hill, and remnants of the ruins of the old Presidio and Church are yet to be seen there. The missionary quarters were removed up the valley of the San Diego river about six miles, in August, 1774. The present mission buildings—or rather their ruins—stand on this last named site. They were begun in 1776, and the church was dedicated the next year; but the establishment was not finally completed until 1784.

The Mission Fathers cultivated the land extensively, they had wide fields of grain, vineyards and orchards, tilled by their Indian converts, and they also possessed large flocks and herds. They brought in water for irrigation by a ditch from a point on the river some miles above the Mission, and the ruins of their massive stone dam are to be seen in the Cajon Valley. Traces of their ditch also remain. The old Mission olive orchard is our best preserved relic of the past. Some 300 trees, in thrifty growth, produce their yearly crops of olives. From this olive orchard all the olive trees in California have been propagated; it is the first planted in the State; cuttings were sent from it by the Fathers to the other missions as they were successively established. In 1846 the last Mission Governor, Pio Pico, by order of the General Government, sold the lands of the Mission San Diego, nearly 60,000 acres, reserving to the Church about 22 acres, which, with the crumbling buildings, olive orchard, etc., are still the property of the Catholic Church.

The municipal or Pueblo organization of San Diego was effected January 1st, 1835. Up to 1825, nearly the entire civilized population lived within the limits of the Presidio. Gradually the soldiers' families moved down to the foot of the hill, and formed the little settlement which afterward became the Pueblo, and until 1850 was the county seat of San Diego county. Thirteen votes in all were cast for officers of the Pueblo at the first town election in December, 1834. July 7th, 1846, the change of flags took place, and San Diego was thenceforth an American town. San Diego county was organized by act of the California Legislature in 1850, and on April 1st of that year the first county election was held. The town polled 157 votes at that election. The first county assessment roll shows the value of taxable property in 1850 as follows: Ranch lands, $255,281; ten stores, $65,395; 88 houses, $104,302; cattle, 6,780 head, $92,280; total value, $517,258. The city assessment roll for the same year gave, for Old Town, $261,210; New Town, $80,050; Middletown, $30,000; total value, $375,160. The aggregate population of the county in 1850 was 780, of which about 600 belonged to the city.

The growth of San Diego proper, dates from the year 1867, at which time the project of a Southern Pacific Railroad (first broached in 1851, and which had slumbered during the period of the civil war) was revived. As the proposed Pacific terminus of the road, San Diego came immediately into prominence. The Old Town was built some distance inland from the Bay. What was called New Town consisted simply of the Government barracks and the officers' quarters, and the ruins of a small wharf. Mr. A. E. Horton came here in the Spring of 1867, and conceived the idea that there would be an important city at this point, and that it would be built on the Bay. Accordingly, he bought at public sale in May a tract of some 960 acres of the Pueblo land on the Bay shore, had it surveyed as a town site, and gave it the name of Horton's Addition to San Diego. This tract is the centre of the present city of San Diego. The wharf now owned by the Pacific Coast Steamship Company was built by Mr. Horton in 1868. The new town grew rapidly; handsome residences and substantial brick business structures were erected, and the county inland began to fill up with people at the same time. The railway prospect, as stated, was the chief stimulus to the growth of the new city; but the people soon began to give attention to the development of the resources of the county; and when it was found that patience must be had, under delay in railroad affairs, the people were prepared to exercise that virtue. No community has ever exhibited greater courage and stronger faith than San Diego, and the reward will surely be reaped by her enterprising citizens. The commerce of the port has steadily increased; good roads have been built to all parts of the interior; farms and orchards have been cultivated; mines have been opened and worked; important industries have been established; and, in spite of "hard times," the county has made steady progress in population and wealth. The contrast between the present state of affairs and that existing twelve years ago may be best shown by comparative statistics. In 1868 the total population of town and county was less than 2,000; total assessed valuation of property in town and county, $171,019. The only industry was cattle raising. The olive grove at the old Mission, a few orange trees at San Luis Rey, some scattering native fig and pear trees, and the small vineyards of the ranchos, were all that the county could show for fruit. About everything that the people consumed, aside from beef, was imported. In 1880 the estimated population of the county is 12,800; the city having 3,000. The taxable valuation of property for the current fiscal year is $5,500,000. Total acres of land enclosed in the county, 124,000; total acres under cultivation 49,591; acreage in wheat, 19,000; in barley, 11,000; in hay, 10,236; in corn, 2,000; in other products, 7,358. The wheat crop of the present season is expected to go above twelve million pounds; the barley crop about half as much. Estimated number of bearing lemon trees, 5,300; orange trees, 5,030; olive trees, 8,740; acres grape vines, 3,430. The wool clip of this year is estimated to be about two million pounds; in 1878 it was 1,050,000; in 1876, 1,837,850. A very important industry, in which San Diego county leads the State, if not, indeed, the world, is that of bee-keeping. Some statistics from the Assessor's returns as to the honey productions of recent years will be interesting: In 1873 the honey exported from San Diego amounted to 116,000 pounds; in 1875 it reached 550,000 pounds; in 1876 this was more than doubled, the exportation being 1,277,165 pounds; while in 1878 we shipped the amazing aggregate of 2,075,000 pounds of honey! The following general statistics are from the Assessor's return of last year: Live stock—horses, 3,619; mules, 325; horned cattle, 10,179; sheep, 115,429; hogs, 2816. Improvements, etc.—grist mills, steam power, 1; water power, 1; barrels flour made, 3,445; saw mills, steam power, 5; feet lumber sawed, 1,630,000; shingles made, 75,000. Quartz mills, steam power, 4; tons quartz crushed, 1,000. Miles of railroad in the county, 164½. The Southern Pacific Railroad enters the county at a point about 10 miles north of the Bay, and crosses the county in a south-easterly direction to the Colorado river at Yuma.

San Diego has always been prominently identified with the scheme of a Southern trans-continental railroad, having been pointed out as the proper Pacific terminus from the very inception of that project. In the law of Congress of 1871, chartering the Texas Pacific Company to build the thirty-second parallel line, it is enacted that this road "shall be constructed and maintained, as a continuous line, from Marshall, Texas, to ships' channel in the Bay of San Diego, California; pursuing in the location thereof the most direct and eligible route, as near as may be the 32nd parallel of north latitude." This Company holds a tract of about 5,000 acres of land on the water front of San Diego for terminal and other purposes, and declares its unchangeable design to build its line to San Diego, although construction has as far been carried on only at the eastern end. Some months ago the Directors of that important Boston corporation, the Atchison, Topeka and Santa Fé Railroad Company sent two of their number to San

Diego, to examine the facilities for extending their line on the 35th parallel from Santa Fé to the Pacific at this Bay. A provisional arrangement was made with them, by which about 5,000 acres of equally valuable water front land with that held by the Texas Pacific was set apart, and is now held pending the consummation of a definite contract. Every intelligent officer of the army who has examined the subject, and the reports of all the engineers concerning the 32nd and 35th parallel railway lines, concur in bearing testimony to the remarkably advantageous natural position occupied by San Diego. There are but two real harbors on the entire Pacific coast of the United States—San Francisco and San Diego—and San Diego is several hundred miles nearer to the Atlantic coast and to every prominent commercial center than San Francisco. A terminus at San Diego gives the shortest railway route between oceans. It is this well-established fact, of the advantage of natural position, that explains the jealousy with which the railroad anticipations of San Diego have always been regarded by San Francisco. But not only as the terminus of the shortest line of trans-continental railway is this fact of position important. Without a direct railroad to the East, San Diego, with merely a connecting branch or branches, with simply local lines of railway, must still become the second city of the Pacific coast. Because, when Southern California is filled up with population—when the people who are pouring into these southern counties are established in productive industry—the Bay of San Diego is the point through which they will most speedily and cheaply obtain their supplies of foreign importation, and to which they will most profitably send their products for exportation. San Diego is the nearest port for ships from Mexico and Central and South America, the Sandwich Islands, Australia, China and Japan, and India. With the Isthmus Canal opened, we shall always be 450 miles nearer European ports than San Francisco.

The harbor of San Diego was designed by nature for an important commerce. It is spoken of by Prof. George Davidson, of the U. S. Coast Survey, in the following emphatic words: "Next to that of San Francisco, no harbor on the Pacific coast of the United States approximates in excellence the Bay of San Diego. The bottom is uniformly good, no rocks have been discovered in the Bay or approaches; the position of the Bay with relation to the coast, and of the bar with relation to Point Loma, is such that there is rarely much swell on the bar; as a rule, there is less swell on this bar than on any other bar on the Pacific coast. There is less rain, fog, and thick haze, and more clear weather in this vicinity than at all points to the northward, and entrance is less difficult to make and enter on that account. Large vessels can go about seven miles (geographical) up the Bay with an average width of channel of eight hundred yards between the four fathom lines at low water. This indicates sufficient capacity to accommodate a large commerce." Admiral Taylor, U. S. N., who visited the port in 1850, said "that San Diego harbor was amply capacious to accommodate twice the present commerce of the Pacific coast." Commodore C. P. Patterson, Superintendent of the U. S. Coast Survey at Washington, transmitted to the Chairman of the House Committee on the Pacific Railroads, May 10th, 1878, the results of the last survey of San Diego harbor by the officers of the "Hassler" in that year. He says: "The depth over the bar is 23 feet. The bar remains in a remarkably permanent state. The distance across the bar, from an outside depth of 27 feet to the same depth inside, is but 285 yards, so that the removal of about 60,000 yards of material would give a channel of 300 feet wide and 28½ feet deep over the bar at mean low water. I have crossed this bar at all hours, both day and night, with steamers of from 1000 to 3000 tons burden, during all seasons, for several years, without any detention whatever. As will be seen from the dimensions given, ample accommodations can be had in this harbor for a very large commerce. There is no safer harbor on the Pacific coast for entering or leaving, or for vessels lying off wharves. It is the only landlocked harbor south of San Francisco, and north of San Quentin, Lower California, a stretch of 600 miles of coast, and from a national point of view its importance is so great that its preservation demands national protection and justifies national expenditures. Fortunately, these expenditures need not be great, if the stable regimen of the harbor be preserved." This harbor compares very favorably with those of the principal Atlantic seaports. It has at mean low tide one foot more water over the bar than New York; it has five feet more than Boston; four and a half feet more than Philadelphia, and over five feet more than Charleston and Mobile.

San Diego possesses a climate matchless in the world, as the reports of the Observers of the U. S. Signal Service here, compared with observations at the most favored spots elsewhere, abundantly establish. We speak more especially of the climate of the city, for passing through the interior of the county, one can have variety in climate. There are three or four different climates within 80 miles of the Bay. The city is situated upon a plateau formed by the gently sloping character of the foot hills, the inclination being to the south west. The soil is dry and porous. On the north-east and south-east are the slopes and peaks of the coast range and Lower California chain of mountains; southward lies the open Pacific Ocean, separated from the waters of the Bay by the long, narrow spit of land which forms a natural breakwater, making the most perfect and absolutely safe harbor on the entire coast; on the west is the peninsular extension from the mainland which forms the western boundary of the entrance to the Bay, and breaks the force of the prevailing wind from the Pacific. Situated thus, the city of San Diego has the most equable temperature known among the dwelling-places of civilized men on the face of the globe. The mountain tops on the north may glisten in their robes of snow, the atmosphere may glow with fervid heat in the Colorado Desert on the east, yet the resident of our city, dwelling but fifty miles distant from mountain top or desert depression, enjoys the same delightful temperature, with scarcely a perceptible difference between winter and summer, wears the same clothing, and sleeps under the same covering, the year around. The temperature of San Diego has a yearly mean of 62 deg. For the spring months, 60 deg.; summer, 71 deg.; autumn, 64 deg.; and winter, 56 deg. The yearly mean temperature of the water in the Bay is 65 deg. The average annual rainfall is about ten inches, with less than 50 rainy days in the whole year. And here the most of the rain falls at night, there are very few of what Eastern people would call "rainy days." There is no mud; after the heaviest rain the surface of the ground dries in a few hours; this being due both to the character of the soil and the natural slope of the land. The late Professor Agassiz, who visited San Diego in 1872, spending some time here, and studying the records of our climate in the Signal Office with great interest, pronounced our climatic advantages unequalled in the world. "Your climate," said he, in a brief public address, "is your great capital. It will be worth millions to you as it becomes known." Sure it is, that, given the railway connections that cannot now long be deferred, the thousands of invalids and rest seekers, who now expensively sojourn in Florida, Cuba, Italy, and France, will turn their steps to San Diego, and find life and vigor in this glorious climate, and the great Professor's words will be realized.

PROFITS OF FRUIT DRYING.

The question is often asked what is fruit worth to dry, and what is the expense of drying.

The lowest capacity claimed by Mr. Plumner the patentee of the Plumner Dryer, is for his factory size 300 pounds of apples or 210 pounds of peeled peaches per hour. At this rate the production of dried fruit for each day of fourteen hours is 825 pounds of dried apples, or 450 pounds of dried peaches. The expense of running one day is, for fuel [illegible] and about one-sixth of a cord of wood, total five dollars per day or about one cent per pound. The expense of drying peaches is about one half more where peaches are peeled.

The present prices of Plumner dried apples are 12 to 14 cents, for peaches 24 cents wholesale. It requires eight pounds of apples to make one of dried, and seven of peaches to make one dried.

This makes apples worth 14 cents per pound and peaches three cents at the orchard.

SEASONS IN SOUTHERN CALIFORNIA.

BY D. M. GRAHAM.

IN all the mass of ideas extant in the Eastern States in regard to Southern California, many have arisen from too much telling, many from too little telling; still others have arisen from too much believing, and, yet a fourth class, from too little believing. Of all the printed matter touching our climate and resources that has found its way to Eastern readers, I have seen very little that is not strictly true. People are often disappointed on reaching us because their pre-conceived ideas are not verified in every particular. I think it is generally because they believe too much. An orange grove is described in all its beauty of foliage and its golden wealth. Immediately the conception takes hold of the reader that he has a description of Semi-tropical California. He gets here, and, by dint of driving under careful directions, finds many orange orchards and very much unoccupied ground, that gives him room to make more orchards. The invalid reads that the air is like wine, and his one idea is to reach here and be well. He locates himself on his arrival where the air is, for his case, worse than his home. He locates himself correctly, and finds that the air will not intoxicate, nor even stimulate, but is reliable and lets him alone, and his own recuperative force heals him.

The reader learns that fresh meat will not spoil exposed to the open air; that there is no frost in Southern California; that oranges will pay $1,000 per acre; that raisin vineyards will pay $400 per acre; ten acres of land will pay an income of $14,000 per annum; that a man can pay for his farm from the first year's crop. He finds that on that particular mountain, that foot-hill, in that man's orchard, and the other person's vineyard, and in the case of a certain farmer or certain year these things are true—but they have given him too general an opinion. He has believed more than was told. Mountain and valley, sea and bay, river and spring, heavy soil and light soil, vary the conditions with every locality so much that only general features can be stated of any considerable district. The minor facts are local.

The climate and the seasons of the Pacific Coast, and, more especially, of Southern California, are so different from those of the States east of the Rocky Mountains, that it is very difficult for a resident of the East to understand them.

As a preliminary, I would suggest that the reader make up his mind that we have no seasons. In the unavailable sense in which a person who has spent his life in the northern countries understands the word, we have no seasons. The usual experience of new residents of Southern California is that they lose their idea of the time of year by the condition of the air or the growth, until some time during the second year of their stay. Until then the whole time seems like Summer. They afterwards add a very mild Spring to the list, call it Winter, and they have the "seasons"—if we must use the word. We have neither Autumn nor Winter in any sense resembling the Autumn and Winter of the East.

I am speaking of the coast valleys—the country between the Coast Range of Mountains and the sea. The mountain tops have Winters—some peaks have eternal Winter at their crowns and eternal Summer at their feet.

The general direction of the trade winds is from the north-west, but local causes make them south-westerly for Southern California, so that the prevailing wind, cool and refreshing from the sea during the Summer days, comes from the south-west. The reason of this is well known. The greater heat of the land while the sun is shining on it cause a rising current of air which is replaced by a cool current from the sea. About sunset the heat of land and sea is equalized and the breeze ceases. In a short time the land becomes cooler than the sea and the reverse land breeze comes sliding down the cool mountain sides across the valleys to the sea. This gives us invariable cool nights. There comes, however, about once or twice a year, a hot breath from the hot inland deserts to the north-east which lasts about three days, which disturbs this oscillatory condition of day and night breezes. These hot spells send the thermometer above 100°, and are about as oppressive by day, and night as ordinary harvest weather in the north-west when the thermometer indicates about 90°. But the steady, reliable Summer days cover a period of about five months, during which the sea breeze is robbed of its moisture in passing over the dry land, and have not sufficient to condense into rain on reaching the cooler mountain tops.

For 150 days the farmer, the traveller, the picnic party, and whoever is out of doors *knows* it will not rain. I think that one fact quadruples the enjoyment of life. Like everything good, however, they get tiresome at last, and we begin to wish for the rains, and, perhaps, for the uncertainty of climate of which we had tired a few months earlier. As the head of the trade winds follow the sun southward in its decline, a point is reached soon after the autumnal equinox where the winds are frequently deflected from a north-easterly course by the Coast Range in Mexico, and are sent up the Gulf of California as south-east winds. They come loaded with moisture. The mountain streams rise slightly and the ground of the valleys is moistened with fogs. In the course of a month or two these clouds from the south-east find a day when a cool current of air moving toward the sea from the Coast Range condenses them into rain drops, and we get a shower; as, for instance, in October, 1877, .86 in. rain fell in two days; in November, .45 in. in one day; in October, 1878, .14 in.; and in October, 1879, .93 in. fell. The first shower in the Fall of 1876 was October 28; in 1877, October 29; in 1878, about October 18; in 1879, about October 21st.

From this time the weather becomes a little uncertain for about seven or eight months. The prevailing impression at the East seems to be that during the rainy season it rains nearly all the time. To get a correct idea of our rainy season you must think of a rather dry Summer in your own locality, including a drought or two of four to six weeks—that will be nearly correct.

The actual facts of the rainfall at Los Angeles for three years, commencing with the establishment of the U. S. Signal Service here, July 1st, 1877, are given below:

	1877-8.		1878-9.		1879-80.		Monthly Average.
	In.	Days.	In.	Days.	In.	Days.	
July	.0	1	.0	0	.0	.0	0
August	.0	2	.0	1	.0	.0	.0
September	.0	1	.0	0	.0	.0	.0
October	.86	3	.14	3	.93	3	.64
November	.45	1	.0	1	3.44	3	1.29
December	3.93	8	4.70	7	0.63	10	3.05
January	3.83	10	3.64	5	1.33	5	2.75
February	3.63	11	.97	7	1.58	8	2.40
March	1.75	10	4.49	6	1.46	6	1.60
April	1	8	1.13	6	3.06	10	1.73
May	.56	11	.21	2	.01	1	.31
June	.66	5	.03	3	.03	2	.03
Totals	21.20	72	11.36	41	20.34	48	17.62

Annual Average, 17.62.

It will be observed that in the average of the year it rains about one day in the week—not all day, however. The most days in any one month was just half the days in February, 1878. That was a very wet month and touched the idea prevalent of six months of our year. But the table shows that the average for the rainy six months is 42 days, and many of these days are only showery. On half of them the sun shines brightly part of the day. Before the rains are done, however, we begin to wish for the dry season again.

During the rainy season the most of the planting is done. Small grains, wheat, barley, oats, etc., are sowed from November to January, and harvested in May and June. Some years the earliest, and other years the latest is the best. When the heavier rains stop early the early sown grain is best. When the rains and fogs hold on late the early grain gets too rank, is liable to fall and to be damaged in coming; as a rule, however, the hay and grain crops are harvested without a drop of rain, and are gathered into the barn as sweet as they grew. About the close of the rainy season, such warm weather crops as corn, pumpkins and water-melons are planted; corn is headed about as in the North-West and harvested in September and October. The wild feed of the plains and hills grows during the Winter, and what is not then

pastured off is cured on the ground by sunshine, pure and sweet. During the Summer months following liberal rains horses, cattle, and sheep may be seen by thousands gathering on the dry, brown hills, which, to the stranger, appear entirely destitute of food. During such exceptionally dry years as 1868 and 1877 the feed is all eaten before Summer comes, and sheep suffer great scarcity of feed—and, even then, it is marvelous how many can be fed. Deciduous trees are transplanted while their leaves are off in the Winter. February and March are now generally considered the best months for transplanting evergreens, among which are the citrous varieties, though these latter are moved every month in the year.

Following is a table showing the time of marketing the leading fruits of the locality as given by Messrs. Woodhead & Gay, commission merchants of Los Angeles:

Oranges	Christmas to July.
Lemons	All the year.
Limes	" "
Apples	July to November.
Pears	" "
Grapes	July 15 to December.
Raisins	October 20 (new).
Peaches	June 15 to Christmas.
Apricots	June 15 to September.
Plums and Prunes	June 1 to November.
Cherries	June.
Japanese Persimmons	November.
Guavas	Nearly all the year.
Loquats	May 15 to June 15.
Strawberries	Nearly all the year round
Raspberries	June 15 to September.
Blackberries	" "
Currants	May 15 to June 15.
Gooseberries	June.
Watermelons	July to October.
Muskmelons	" "

Our thermometer behaves with much more discretion and kindness than the boiling and freezing instruments of the East.

Following is a sample, covering the first twelve months of the service of the U. S. Signals at Los Angeles:

1877.	Mean.	A. M.	P. M.	Mid-night.	Maximum.	Minimum.	Difference.
July	71.1	63.1	80.1	66.8	93	56	33
August	70.1	61.7	78.6	64.4	97	56	31
September	69.8	61.6	77.8	65.6	93	57	41
October	63.1	56.6	71.1	62.2	90	47	43
November	62.1	53.8	73.1	59.5	86	43	43
December	55.3	49.5	62.3	54.5	81	36.5	44.5
1878.							
January	54.1	45.1	62.0	53.6	83	37	46
February	54.6	45.8	61.1	53.7	77	41	36
March	59.8	53.5	64.8	57.2	77	41.5	35.5
April	63.1	55.5	69.1	60.8	82	41	41
May	62.1	52.9	69.5	57.3	87	44	43
June	72.1	63.5	72.1	67.5	87	44	43
Annual Mean	62.1	57.4	70.3	62.5	93	46	37

If the reader will carefully examine the above table he can get a very correct idea of the thermometer at Los Angeles. Different localities would vary the details slightly, but the general result would be nearly the same. During each of the last two Winters the thermometer fell once to 30° and gave us a light frost. On each of these occasions some damage was done to fruits that have no frost down on their programme. It was, perhaps, rapid in advantage to Northern fruits, which produced much better than before. A person accustomed to such a climate as ours of course feels slight cold more than a person whose blood tingles with the recent memory of the mercury 60° below the freezing point; but the luxury of this mild climate is something beyond description. Life is a poem—existence is sunshine, only flecked with shadow. There may be places on the earth where the means of life can be more easily and more quickly obtained; there are old attachments which bind one to less favored climes; but for a place to *live*—for a place where subsistence is worth while, where life is worth having and worth keeping, commend us to Southern California. Day after day those mellow afternoons glide by into the past, and never a California bard sings with him of New England—

"God has forgotten the world."

but, always bright and clear with the glad sunshine and the song of birds, the poet's hope is realized—

"God will remember the world."

Farmers are Requested to save the best samples of all kinds of Grain in the stalk, bunches of Wheat, Rye, Oats, Barley, etc. cut close to the ground, and securely tied near the heads, middle and bottom, and if very full, in four places—for exhibition at the Horticultural Fair this fall. We are solicitous that a *large number* of such specimens should be so cut and arranged, not only for exhibition at our fair, but to be sent East to show what we can do in the grain raising business. Premiums will be awarded for the best specimens.

Californian Wine has begun to go to Europe, and before long the Eastern States will probably discover its value, after having bought of it largely in foreign glass, under foreign corks, behind foreign labels. It is a very short time since your average Californian spoke of the "native wines" with a grin, but the vine growers on the coast have been learning how to manage their vines and turn the grapes into wine. Squeezing the berry and fermenting its juice is no haphazard matter, and as little one of mere routine. A process has to be discovered almost away for each vineyard, as vine growers in Europe have long since found out, and American growers on the coast have proved as facile and inventive in discovering their own methods as Americans generally are in dealing with such problems. The result is a marked improvement in California wine, which is beginning to be recognized abroad and at home.—*Prairie Farmer, Chicago.*

Apiary Department.

CONDUCTED BY S. LEVERING.

THE HONEY PROSPECT IN SOUTHERN CALIFORNIA.

From our exchanges we discover a prevailing impression that the honey crop in Southern California will be unusually large. We are sorry to say that this impression is very erroneous, as the facts are anything but flattering for even a half crop. There is no want of flowers, but a lack of nectar.

The peculiar state of the atmosphere is not conducive to the secretion of nectar in the flowers, the nights being cold and foggy, and the greater part of the day cool enough it would seem for the little beings to don their overcoats.

Warm nights as well as days are necessary for the secretion of honey. Now, in June, we look for our largest yield of best honey—the time lost now cannot be regained. The sweet moments are rolling by and the cream of the season is borne off on the wings of flitting time, and we can reasonably hope for only a limited crop; and, as long as this state of weather continues, we cannot reasonably expect any thing better in the future. Southern California exhibits now anything but the features of Canaan.

How long the present condition of affairs will continue no one knows. It is to be hoped that a sweeter future will soon dawn upon the apiarists, who feel this blow more keenly than any one else, as the total failure of last year left many of them in straightened circumstances.

Should there be a favorable change and a reasonable crop obtained, another difficulty will present itself in the form of commercial communists, who, drone-like, wish to live upon the labors of others—we mean middle-men, who are now siring the bee-keeper's pile and putting his hard-earned products below living rates.

The only means of defence is for all who can—and there are many who can—to hold their honey. Some of our bee keepers' associations have already passed resolutions to this effect.

Many regard apiculture as an exceedingly easy and lucrative business, but this is a great mistake. There is no branch of industry more subject to extreme reverses than that of apiculture—it is all honey or no honey. In the midst of prosperity it suddenly bows to adversity. He who engages in it expecting a life of ease will find himself much disappointed. About one in ten are successful apiarists.

The apiarists of Southern California are taking active steps to make the largest and finest display of honey at the Southern California Horticultural Fair this Fall ever seen in the world.

Mr. N. C. Carter has about three hundred bee-hives, and takes samples of Honey first with him to show what Semi Tropic California can do in that line.

Letter No. 2.

BUTTER DAIRYING IN SOUTHERN CALIFORNIA.

By General J. H. Shields.

If it be asked why so much space is devoted to the dairy, it may be replied, because the dairy industry "concerns more hearths and homes than any other in the land." It is the great national and international subject. One and one-third billions of dollars are invested in it in the United States. Aside from millions of dollars worth of milk used as milk, our annual product of butter and cheese exceeds the value of the wheat crop by fifty million dollars, and is one-third greater in value than the cotton crop. Butter and cheese pay ocean lines, annually, a million dollars freight. Butter, cheese and milk pay our railroads ten million dollars freight annually. Space is devoted to the dairy, because the fame of alfalfa and the success, here, of dairymen from the Western Reserve and the regions of Goshen are awakening inquiry. It is not proposed to duplicate the almost persuasive advocacy of a few years ago, of the really unequaled eligibility of our section for creameries and cheese factories. In those days, the prediction that the cheese factory, a strictly northern institution, would become even more at home in semi-tropical California than anywhere else, seemed rather like a burlesque on orange groves and banana plantations. From a semi-tropical standpoint, the predictions seemed to refer to a coming cheese factory, founded upon the eternal unfitness of the meteorologies. Another seeming vision was the sensationalizing of entire columns of the indulgent journals, by ringing the changes on the paradox, that the sugar beet and the beet-sugar industry, supposed to be at home only in the North, would become more at home in semi-tropical Southern California than in the North. Now, in the vicinity of Florence, patches and fields of sugar beets, of the best quality, are maturing, and the Florence beet-sugar factory is rapidly building by Ernest T. Gennert, the veteran of the beet-sugar industry west of the Atlantic. Now, several cheese factories, near Florence, are turning off tons of cream cheese weekly, inferior in no respect to the best Eastern cream cheese. The beet-sugar factory is referred to here, because it is destined to become a partner of the dairy industry; for beet pulp, the cheaper complement than grain of the dairy allowance of hay, will, in due time, assert its sufficiency. As certainly as beet-pulp is a complement or finisher of the hay ration, so certainly will the beet-sugar factory and the dairy become each the complement of the other. As twenty acres in alfalfa or in sugar beets may support an average family, each twenty independently of the other, even more tributary to revenue will each twenty become through the reflected mutualities. Profitable five and ten thousand dollar beet sugaries are, for local, natural reasons, likely to become common in Southern California. The mutualities among the twenty-acre farms, dairies and beet sugaries, combining with intrinsic capacities for sustaining a dense population, will, in time, so dot the alfalfa and beet regions with cheese factories, creameries, sugar beet factories, related factories, related homes of factory people, and small farmers, that the whole country will resemble a village.

VISITING THE CHEESE FACTORIES.

Yesterday, I found Mr. J. J. Bullis, of the Star Cheese Factory, three miles south of Florence, finishing up a fair day's pressing. Mr. Bullis is the pioneer of the regular cheese factory in Los Angeles county. Since my last visit, he has greatly enlarged the factory building. He had been making 700 pounds of cheese per day, but is now making 200 pounds a day, on account of some changes now transpiring in the contracts with milk growers.

A stream of pure, artesian water fountains up near by, and, at will, flows by or through the factory. Sixty degrees is the uniform winter and summer temperature of the water. Artesian water may be had in hundreds of places on the alfalfa dairy belt. The dairy belt is parallel to the Pacific Ocean. It is within a few miles of the ocean. Hundreds of cheese factory sites are swept by the daily ocean breeze. The site of the Star Cheese Factory, like hundreds of equally eligible cheese factory sites, is an average distance from the ocean. To the Star Factory, the swift, cool, Pacific summer breeze bears the mellowed roar of beaching billows and the purity of salt. The Pacific summer breeze is swifter and cooler than that of the Atlantic. It daily whistles around, below, above and through the Star Cheese Factory, cooling and purifying. The cheese maker of the Los Angeles dairy belt must combat the swift, cool, salty Pacific breeze, in order to defy the godliness of purity. There were three and a half tons of clean, solid cheese ripening on the shelves at the Star Factory. Other tons were in Arizona, or on the way. The Star, and, indeed, all the cheese factories here, fill orders too rapidly for the thorough ripeness of their products. The Star cheese is frequently on sale in the markets of San Francisco, Bodie, Salt Lake City, and in the villages and cities of Southern California. Mr. Bullis deprecates the cry against middlemen. He says he cannot be both manufacturer and merchant; that the new and rapidly increasing dairy industry of Southern California is daily outgrowing its mercantile management, but not the demand. That plenty of middlemen are wanted to buy, or to take on commission; to hold, to ripen; to reach distant markets; sagaciously to infuse strength into the markets. Mr. Bullis spoke earnestly, because he perceives the necessity of a mercantile management, as expansive as the expansive dairy industry. Progress is steady, but is susceptible of acceleration by mercantile magic.

ANOTHER CHEESE FACTORY.

This four-months' old cheese factory at Compton is under the capable management of Mr. J. J. Harshman, from the Western Reserve, where he successfully managed a cheese factory with 800 cows. Has in the curing room seven and a half tons of cream cheese. Is making 425 pounds daily. Daily make was and will be greater. Sales satisfactory. Competes successfully with Northern and Eastern cream cheese; in fact, is excluding such from the markets of Southern California and Arizona. Quality equal to the best Western Reserve cream cheese; keeps better. Stands up perfectly in the warmest weather. Does not become soft or puffy. Western Reserve and other Eastern cheese loses shape and sharp angles, becomes soft and puffy in the warmest weather. Such effects do not occur here. Kept a cheese four months. In June, sent it to Merchant Leo J. Thompson, of Los Angeles. It opened perfection; no mould, vermin, sourness, softening or undue hardening; improved by age. It was a cream cheese, made without care, other than what is bestowed on every day's pressing. Connoisseurs adjudged it equal to the best Eastern cream cheese. Ten pound cheeses sell best. Cheese here loses more weight and gains more in value than in the East. A cheese at one month old weighed thirty, and at four months old weighed twenty-six pounds. Receives milk of the farmers. Farmers have the whey without other expense than removing it from the vats to their houses. Sells the cheese, retains two and a half cents of the money received for each pound, and pays the remainder to the milk-grower. In order to keep trail of or to shadow each milk-grower's delivery of milk through the cheese made of it, on to the money received for it, an account is kept of each milk-grower's name; the date and pounds of each day's delivery of milk, as a credit annex to the grower's name; an account of the cheese made of each day's delivery; of the price and net proceeds of each day's make of sold cheese, which is, in effect, the price and net receipts for each day's and each grower's delivery of milk, thus exactly traced, and accordingly paid to the grower, less two and a half cents of the net receipts for each pound of cheese, which two and a half cents is to compensate the cheese maker. Thus, the milk-grower is paid according to the sale of the cheese made of his January deliveries of milk, and so for every month. Other cheese factories simplify the accounts, by turning over to the milk-grower his proportionate part of each day's make of cheese, charging the milk-grower two cents a pound for making the cheese. By this arrangement the milk-growers become sellers of cheese. So many sellers derange market prices. A third plan, now being re-adopted at the Star Factory, is to pay in money so much a pound for the milk. This plan is even simpler than the second, and has all the advantages of the single salesman principle of the first stated method, but requires more capital, assumes greater risk, and may demand the indemnity of low prices for milk. Each plan has its advantages, and time will tell

which is the best—the out-and-out co-operative principle of the first plan, the partial co-operation of the second, or the out-and-out non-co-operation of the third plan. The out-and-out co-operative Anchor Cheese Factory has sold the March pressings, and has closed the accounts of that month, by paying over what was found to be due to the milk-grower, which was an average per hundred pounds of milk of 85 cents; also April, 75 cents; May, 75 cents. Mr. Hurshman, upon data, calculates that June will close at an average price per hundred pounds of milk of 80 cents; July, 80 cents; August, 90 cents; September, $1.00; October, $1.35; November, $1.35; December, $1.35; January, $1.25; February, $1.05; year's average, say $1.01⅔ per hundred pounds of milk, and the whey returned. Mr. Hurshman says that his milk-growing customers are increasing their cows under the influence of these prices. Why not? It is nearly all alfalfa milk. An acre here in alfalfa yields about eight times as much feed as an acre in the East yields of dairy feed. Alfalfa is so tender, digestible and nutritious, that it stimulates the flow of milk, fed in the form of hay, only less excessively than when fed green. Moreover, one half of the Eastern yield of one-eighth as much as our yield of dairy feed per acre is fed in winter, merely to keep the cows alive. Our eight times their yield of dairy feed keeps up the flow of milk from January to January. Our cheese factories and creameries are incessantly operating all through Summer, Autumn, Winter and Spring. Mr. Hurshman says that the dairy season in the Western Reserve opens about the middle of April and closes about the middle of October. Here, he is delighted to find that the dairy season opens and closes on the first day of January. In point of fact, the dairy season never closes in Southern California, and, of course, never opens. Mr. Hurshman declares that this is, in all respects, a vastly better dairy region than the Western Reserve.

THE WALKER CHEESE FACTORY.

Two miles east of Compton, at Sayner's cross-roads, is Mr. Walker's cheese factory. His factory cost about $500. He has in the cheese curing room about five tons of ten and thirty-pounders. It is daily increasing in value, both from age and a stiffening of the markets. Shelved cheese is idle, but it draws as loaned money. It is one of the few things that can keep up with a California mortgage. Mr. Walker declares that one square mile around his factory, in alfalfa, would run a lively cheese factory.

THE NEWEST AND CHEAPEST CHEESE FACTORY.

Yesterday was the ninth day since the last board was nailed on Mr. Jas. H. Cocke's cheese factory, two miles south of Downey City, and just east of Los Nietos College. Mr. C. is of Virginia ancestry, and of Missouri nativity. Learned to make cheese in San Luis Obispo. One of the cheese dairymen of San Luis Obispo visited Los Angeles a few years ago, with an eye to a dairy. He returned with malediction upon the man so idiotic as to intimate that this land of the sun is fit for a cheese factory. Mr. C. heard him, doubted, came, saw, built a $250 factory, made the first cheese ten days ago. Shelves now loaded with cream cheese, while all around is still the land of the sun, of the myrtle, the orange and the pomegranate. Mr. C. bought a handsomely improved homestead at $100 per acre, and is wrapt up in his bargain, with the accompaniments of orchards, vines, perennially blooming shrubs and trees, a stylish cottage, and now a cheese factory.

CHEESE FACTORY AND A GORGEOUS SETTING.

Handsome homes dot the rich country around the cheese factory of ten days. Respectively, in the yards, gardens, truck patches, fields, orchards, vineyards, groves, are oleanders, jasmine, pepinac, heliotropes, geraniums, fuchsias, calla-lilies, rose trees, myrtle trees, turnips, carrots, beets, peanuts, artichokes, watermelons, musk-melons, squashes, pumpkins, sweet and Irish potatoes, sugar beets, mangels, sugar cane, sorghum, barley, wheat, rye, buckwheat, Indian corn, oats, hops, flax, castor-bean, alfalfa, tomatoes, cabbages, cauliflower, broccoli, lettuce, onions, celery, cucumbers, pepper, salsify, beans, peas, egg-plants, the peach, apple, pear, apricot, nectarine, quince, currants, blackberries, gooseberries, raspberries, strawberries, English and black walnuts, pecans, Spanish and Italian raisin, table and wine grapes, almonds, figs, guavas, oranges, bananas, and all other soil products common to the temperate zone and to the semi-tropics; and, lastly, comes the cheese factory.

PROFITS OF THE CHEESE FACTORY.

"How, Mr. C., will your humble, homely cheese factory make headway among such variety and splendor of agriculture, horticulture, and pomoculture?" "By profits," Mr. C. replies. "Much around here is more show than profit. For the show sixpence there, here the cheese factory and the milk-grower win the nimble shilling. For our nimble shilling their best set-off is a slow shilling. There is neighbor Dismuke, whose forty acres in corn, barley and other field crops brought him only $400 gross last year, on account of low prices. He says, in alfalfa, the land will keep a milk cow to the acre. I told him I would pay him $6 an acre for all such yield of alfalfa, and save him further trouble and expense. But suppose he has a cow to the acre of alfalfa, and lets me turn his milk into cheese. If he has good cows, and manage them properly, he can rely on an average of at least two gallons per cow per day, for three hundred days in the year; or six hundred gallons of milk per cow or per acre; or six hundred pounds of cheese per cow or per acre per annum. I will make the cheese for him at two cents a pound. He will average, year through, at least ten cents a pound on the basis of weights, green. It is plain that the cheese product of Mr. Dismuke's acre will bring $60, of which he will get $48, and the cheese maker $12." Mr. Dismuke's land is no better than that of his neighbors. The Hon. J. W. Venable, on similar land, in an adjacent neighbourhood, verified the above calculations with his herd of dairy cows. Mr. Cocke bought into the Dismuke neighborhood last November, at $100 per acre.

CHEESE FACTORY AND MILK-GROWERS' COLONY.

In reply to inquiries on this subject, it is suggested that intending colonists need not buy the high priced, improved dairy lands, because unimproved, equally adapted, and, of course, lower priced lands, in large tracts, may be bought a few miles distant from the Dismuke neighbourhood. Here, dairy colonies, preceded a few days by the cheap cheese factory, built by one of the colony in the centre of the colony tract, may settle down around the factory, and, if so fortunate as to have cows to begin with, may, on wild grass, within a day begin to have an income. Alfalfa seed sown in February will afford three or four mowings the first year, and, thereafter, from seven to eight mowings annually, of one and a half tons per mowing, and three months' winter grazing besides. Gradually the colonists may economically copy the beautiful, varied and valuable agricultural, pomocultural, horticultural and floricultural developments in the Dismuke and other neighborhoods of the alfalfa or dairy belts.

VISITING MILK-GROWERS.

Agriculturally engaged, I naturally take a lively interest in the dairy industry, and frequently visit those engaged in dairying. Called yesterday at the dairy of John McLaughlin, a prominent grower of milk for the cheese factory. Mr. McLaughlin, in the Autumn of 1875, at his home in Armstrong County, Pennsylvania, borrowed $300 to bring himself and family to Los Angeles. His friends said, "Good-bye, Mc.! Sorry to see you starting to California, and to ruin!" "To ruin I, myself, thought I had come," says Mc. On reaching Los Angeles, money all spent, a large family of small children, land high, credit sales one to two per cent. a month, and hiring out a precarious reliance for the support of a large family by the wages of one person. Los Angeles seemed a Paradise for the rich, but a rack for the poor. As "Good-bye, Mc.!" began to trail him as a dismal dirge, and "Sorry to see you starting to California, and to ruin!" began to pinch him as a "Mane Mene Tekel Upharsin," McLaughlin happened on the Hon. J. S. Shanson, President of the Los Angeles County Bank, and a perfect stranger. Mc. says: "He put me on this place, where you see me to-day; let me have house, barn, stables, crib, plows, harrows, mower, wagon, horses, harness, dairy cows, provisions, and money, to farm and to dairy on shares, and to work my way into a part ownership of this farm and all that is on it. I am now half owner of a large part, expect to be half owner of all, and finally to be sole owner of the whole of the dairy land for fifty cows, and almost as many more stock cattle, mostly half dusays; sole owner of one half of this valuable ranch and its furnishments

of implements, work animals, and improvements. Moreover, have paid the $300 dollars and interest, borrowed to bring me here, and delinquent taxes back East to the amount of $130." Now, as this rise of a moneyless stranger in California comes of the banker's trust and a butter dairy, that rise is my fact-answer to the question, "How is butter dairying in Los Angeles?" The other question, as to "How is milk-growing for the cheese factory?" I also fact-answer, in this, that "I have quit making butter, at which I did well, and am having Walker to make cream cheese of my milk, because in this I am doing better. Most of our fifty cows will come in fresh within the next ninety days; cheese will go up, and our income will run up to near twenty dollars a day, the half of which will be mine. Besides this, we have just sold about one thousand bushels of corn at about the cost of production, a round lot of fat hogs without profit. Sell the male calves of the band, and of eggs and poultry a trifle. Our half Jersey cows are worth $40 at two years old, and, if the dam is a choice Shorthorn or scrub milker, the cross is a better milker than the full Jersey. We are increasing our fields of alfalfa, which yield eight crops from March to October, and no little grazing from November to February. But," says Mc., "if you repeat what I say, add that I stand to my original impression, upon my arrival, that Los Angeles is the rich man's Paradise, but the poor man's rack, unless the poor man catches a banker, or, at least, has money enough to pay for twenty acres of alfalfa land, twenty cows, a milk cart, two horses, a wagon, a plow, some harness, a shanty, some furniture, and has some money remaining."

Space fails me to give other cases, prominent among which are the cheese factory of John Bixby, of the Alamitos; of Julian Valdez, of Ballona; and of scores of private creameries; and of numerous more or less seriously contemplated cheese factories.

RIVERSIDE'S RESOURCES.

THE WONDERFUL GROWTH OF A SOUTHERN CALIFORNIA COLONY.

EIGHT MILES OF BEARING ORCHARDS AND VINEYARDS WHERE EIGHT YEARS AGO THERE WAS NOTHING BUT A BARREN PLAIN.

"I HAVE been but three weeks in Riverside," said a gentleman to us on the pleasant veranda of the Glen Cottage Hotel, "but I have seen enough to enable me to decide to make this place my future home. Never in my travels have I enjoyed such a climate and seen such flourishing trees, vines and flowers, such pleasant people and delightful homes." This sentiment will be echoed by all tourists and travelers who visit the settlement, examine its resources, and note the continual progress on every hand. It could hardly be believed by the stranger, who visits the colony in July, 1880, that these bearing lemon and orange orchards, these beautiful vineyards loaded with embryo fruit, these ornamental and useful trees and shrubs on every hand were, many of them, planted *less* than eight years ago. Comfortable if not showy edifices are to be seen on every hand—Ideal homes where the owners can literally sit under their own vines and fig trees.

THE WATER SUPPLY.

The Genii, whose magic touch has changed the almost desert and caused it to bloom like the rose, may first be seen a few miles from the settlement where it appears in the shape of a huge irrigating ditch, at the time of our visit full to the brim with water taken from the Santa Ana River, which in turn receives its supply from the greenclad summits of the neighboring mountains. It wends its course to the borders of the colony tract where it begins its life giving mission and continues it throughout the whole settlement.

It is the opinion of the State Engineer that, in some respects, water taken from rivers is superior for irrigating purpose to that from artesian wells or other sources—If so Riverside's supply is of the very best quality, but as a beverage we cannot speak highly of it. While it is not unhealthy, unless cooled, it is warm and discolored. This difficulty, is, however, largely obviated by Wells. The water is held, and sold by the Land and Irrigating Company, and, so far as we could learn there is an abundant supply. Everywhere in Southern California there has been a tendency to use more water than is actually necessary, often to the real detriment of the trees and vines. Careful investigation has proved beyond doubt that cultivation is of greater importance than frequent irrigation. If a plant is forced to penetrate the soil to some depth for the natural moisture it becomes far more healthy and vigorous.

CLIMATE OF RIVERSIDE.

The atmosphere of Riverside is dry and healthful. It is beneficial in consumption, asthma, catarrhal affections, etc. Many invalids have recovered their health, and the good people will excuse us, we trust, if we state that their cemetery seems to be the least flourishing portion of their settlement. Physicians complained to us of a dearth of patients and the two drug store are doing anything but a rushing business. Probably the dryness of the atmosphere and the regular afternoon sea-breezes are responsible for this state of affairs. There is no miasma, no "chills," and we cannot learn that any epidemic has ever prevailed there.

THE BUSINESS CENTER

Is built chiefly of brick and though not large is amply sufficient for the present needs of the colony. There are three hotels, Glen Cottage Home, Riverside Hotel and Riverside House. Three general merchandise stores and twelve or fifteen other establishments. There is a large hall used for the various societies and the Episcopal Congregation on Sunday. Two religious denominations have small edifices for their people.

THE POPULATION.

Riverside is settled principally by Eastern people—Many New Yorkers with a sprinkling from New England and the Western States. The census will probably show a population of over 2,000. Nearly all came with considerable capital and have not had the disadvantage of poverty to contend with.

RIVERSIDE'S INDUSTRIES.

Horticulture is the great industry of Riverside and the people are confident that the quality of their fruit will challenge comparison with that of any of the great fruit producing regions of the world.

Last Spring they had a fine opportunity to show the wonderful variety and excellent quality of their horticultural products by an exposition which was so successful that it surprised even the oldest settlers. Many Eastern visitors were present and Riverside received quite an accession to her population as one result of her Exhibition. Raisin making is one of the most successful and profitable industries of the colony. The dry atmosphere of the whole region makes it possible to cure the fruit in a very superior manner and there will be no overproduction, for the market for raisins is unlimited and 7,000,000 pounds are anually imported into the United States. One gentleman showed us three acres of vines, six years from the slip, from which he stated that he realised $1,000 last year.

The Northern fruits, with the exception of cherries and plums bear immense crops. Apricots do exceedingly well. We saw many two years old trees loaded with fruit and the best of all is that this year there will be a market for all that can be raised. The San Jose Fruit Packing Co., has established a branch factory at Riverside and are prepared to purchase any amount that may be offered.

TRANSCONTINENTAL RAILROAD.

The Southern Pacific Railroad will reach its Eastern terminus in the next two years, and a route free from the many disagreeable features of the Central Pacific, will be open for travel. It is but reasonable to presume that the completion of this thoroughfare will greatly benefit Riverside and a large number of tourists and sojourners will find their way to the pleasant little colony.

TEMESCAL TIN MINES.

Within five miles of Riverside are the only known tin mines in the United States the ore being of good quality and in paying quantities. We learn that a company is being formed in New York to work this valuable deposit; if so the business interests of the settlement will receive a fresh impetus

We have intended to describe some of the pleasant Riverside and Arlington homes we visited and to give an account of the methods by which these people succeed when many would fail, but the pages of SEMI-TROPIC CALIFORNIA are full already so we must defer our notes on this subject until the next issue.—J. O. P.

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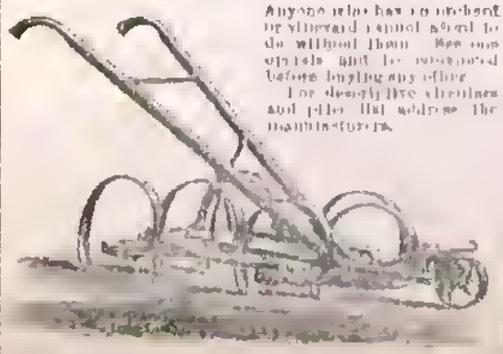
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Stow's Bowl	2 60	60	2 60	Little Grocerie	25	10	20
Superfine, do		10	2 50	Honey	15	65	20
Graham 50-lb sack		05	1 45	Do.	10	60	12
Buckwheat		60	15	Extracted	8	65	12½
Oatmeal Cal, 10-lb sacks		60	55	Bacon, Cal	8	60	11
Eastern do		60	75	Hams, do	9	60	12½
Corn Meal, lb	10	60	15c	Eastern	15	10	11
Sugar, w. crshd	12	10		Potatoes, cwt	90	10	....
Light Brown	9	65	10	Onions, cwt		05	4 00
Coffee, Green	20	60	35	Beans	50	60	2 50
Tea, Choice	50	65	1 00	Butter	1 40	10	1 50
Tea at Jap'n	30	10	80	Eggs	5 00	10	6 00
Candles, Adamts	18	60	25	Fresh Beef	5¼	05	8½
Soap, Cal	7	60	10	Round steak	10	05	8½
				Sirloin	10	10	12
				Porterhouse	12½	05	15
				Chicken	25	10	45

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The Riverside Land and Irrigating Company, of San Bernardino County, offer

15,000 ACRES!

Of the most desirable land in Southern California for Semi-Tropical

FRUIT GROWING

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Beautiful and Healthful Homes.

These lands are located in the Santa Ana Valley, San Bernardino County, 50 miles southeast of Los Angeles, and 7 miles south of Colton, a station of the Southern Pacific Railroad.

Twenty-eight miles of irrigating canals are now completed, and there is abundant water in the dryest seasons to irrigate all the lands offered by the Company. About 1,000 inhabitants are now in the Colony—enterprising and intelligent people. We have good schools, four church organizations, daily mail, telegraph line, newspaper, etc. Lands are offered at moderate prices and on liberal terms, and no lands are sold but to actual settlers. I invite all seeking homes in this portion of the State to call and see us before purchasing elsewhere. Every facility will be afforded for the examining of the lands offered.

S. C. EVANS, President R. L. & I. Co.

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LAND AND WATER ASSOCIATION

This Association is now offering for sale on easy terms some of the finest lands in California. They are situated about 1000 feet above the sea, in the rich and beautiful valley of San Gabriel, protected on the north by the Sierra Madre Mountains, while on the west a range of hills and mountains temperes the chill of the sea breeze as it passes over them for forty miles before reaching this locality. This combination of advantages makes it a delightful residence for invalids, while the lands produce all the grains and fruits of the temperate zone, and many of the products of the tropics. The land is supplied from large reservoirs fed by mountain springs, and carried in pipes along all the avenues of the tract which is divided into ten-acre lots, with water rights for every lot. This property is but seven miles from Los Angeles, and near the line of the Southern Pacific Railroad. For prices and full details, address

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Will always be furnished with the best supplies that can be procured in the market.

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AUGUST

SEMI-TROPIC CALIFORNIA

Devoted to Agriculture, Horticulture, and the Development of Southern California.

LOS ANGELES, CAL.

CARTER & RICE,

PUBLISHERS

VOL. III. 1880. No. 8.

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A Private Hotel on the Sierra Madre Mountains, in full view of the Orange Groves of the San Gabriel Valley in Southern California, for the accommodation of parties seeking a cool and healthful climate. It is four miles from the Mission San Gabriel Railroad and Telegraph Station, thirteen miles to Los Angeles. The buildings are entirely new, furnished in 1885, and with all the comforts and conveniences. For further information address W. P. RHOADES, San Gabriel, Los Angeles Co.

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FOR SALE—TO RENT—AND FOR DISPOSAL OTHERWISE.

In different portions of Los Angeles County and City.

Especially upwards of 2000 acres of land well adapted to the growth of vineyards, to be disposed of on shares, i. e., one portion to be cultivated, planted and kept in grape vines for three years, in consideration of conveyance of another portion. Of the lands last referred to a large body is on the Tujunga Ranch, and is irrigable from the Tujunga Creek during the winter and up to the middle of June. Some capital as well as labor is requisite for constructing ditches and clearing off the brush which grows on about two thirds of the land. Any company or colony seeking a location desirable as an investment, or as profitable, healthy and pleasant homes, should look at these. For particulars, apply to

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AND

SOUTHERN CALIFORNIA HORTICULTURIST.

VOL. III. LOS ANGELES, CAL., AUGUST, 1880. No. 8.

RIVERSIDE HOMES.

ONE feature of country life in California which is sure to impress strangers from the Middle and Northern States unfavorably is the uncomfortable looking habitations which are occupied by our farming population. Contrasted with the neat, roomy and comfortable residences seen in the fertile valleys of the East, a California farm house is decidedly at a disadvantage. Our climate, with three hundred and fifty days of sunshine every year, renders an expensive home almost unnecessary, and we have seen cultured families in Southern California dwelling in shanties through which daylight, from many cracks and crevices in the walls, streamed through, and which would hardly be considered fit for woodsheds in the Eastern States.

But most of our towns and settlements are improving in this respect, and many of our fruit growers and farmers boast of as delightful and substantial residences as can be found anywhere. This is especially the case in Riverside, which in some respects strangely resembles some of the beautiful suburban towns in the neighborhood of New York City. Nearly every house is surrounded with a thrifty-looking semi-tropical orchard, with deciduous trees, vineyards and flower gardens in close proximity. Most residences are built of wood with an occasional adobe building, which, after all, is perhaps best adapted to our climate. They are cool in summer, warm in winter, and somewhat less expensive than frame structures. The astonishingly rapid growth of vegetation in the colony is attested on every hand and highly improved places spring into existence in a remarkably short time.

We should like to go into details and describe every place in the settlement, and think that such a description would not prove uninteresting, but shall content ourselves, in this issue, with mentioning a few which we had the opportunity of thoroughly examining.

Mr. S. C. Evens, the President of the Riverside Land and Irrigating Company, has a delightful residence on Arlington avenue, in Arlington settlement. It is highly improved, planted with orange, lemon, lime and deciduous trees, and in a few years will become one of the most attractive homes in Southern California. Mr. Evens is an enterprising gentleman and, mostly through his energy and perseverance that the colony has attained its present prosperity.

Mr. H. J. Rudisill, one of the directors of the company, has also an exceedingly fine tract, situated on Arlington avenue. It contains sixty acres, with 4,500 young orange trees, 1,250 lemons, 250 limes, and 2,000 vines. Mr. Rudisill is an affable gentleman, well informed, and a firm believer in the future of Riverside.

Mr. J. H. Beaudet, a former resident of New York, has a beautiful residence nearly opposite that of Mr. Evens. It occupies one of the best locations in the settlement.

Mrs. Le Grand Lockwood, formerly of South Norwalk, Conn., has a promising young orange orchard containing over 4,000 trees. She has a lemon orchard of 400 trees. Her place contains fifty-eight acres, pleasantly located.

Mr. W. E. Chaffey has a thrifty-looking tract of 40 acres, with 2,500 orange trees, 1,300 apricots, and 1,100 vines.

Dr. Jarvis has charge of several places, besides his own, and, judging by his own place, he takes care of them well and will present the owners with delightful homes in a few years. He owns himself 120 acres, with 1,500 orange, 1,800 vines, and a large variety of deciduous trees.

D. C. Twogood has 25 acres, with 500 lemon trees, 150 lime trees, and a large orange orchard and vineyard. His raisins took the premium at the last fair.

A. J. Twogood has a well advanced place of 40 acres, with an abundance of bearing trees and vines. Orange trees, 1,000; lemon trees, 200; and a general variety of other trees.

T. W. Cover, a genial and successful gentleman, has 200 acres, 1,000 orange trees and 1,200 lemon trees.

H. M. Streeter, who represented San Bernardino county in the last Legislature, and his constituents say he did his work well, has 80 acres in what is known as the Government Tract. When the title, which is disputed by the railroad, is settled, he will make extensive improvements.

Mr. A. D. Haight, also on the Government Tract, has 40 acres, 960 orange trees, 350 almond trees, and 200 lemon trees.

Mrs. A. L. Eastman has a beautiful vineyard which will yield her a handsome income. Her semi-tropical and deciduous trees are doing well.

Rev. M. V. Wright has 20 acres improved, about 75 orange trees, and 6 acres in vines.

E. Conway, one of the legal fraternity, has 5 acres, 100 orange trees, 50 lemon trees, and 500 limes.

E. H. Boreham has 40 acres, extensive nursery stock, and 2,000 orange and lemon trees.

C. A. Crosby, a gentleman who has the last lot in the Arlington tract, is delighted with Riverside and is busy at work improving his place. He has built a two-story adobe house, which is one of the most comfortable in the settlement, and looks very substantial. He owns 20 acres, planted with 1,675 lemon trees, 500 vines, 400 deciduous trees, and a large number of orange trees.

Shugart & Waite have 24 acres, 1,500 orange trees, 500 lemon trees, 100 lime trees, and 1,100 vines. Mr. Waite has charge and is an experienced horticulturist. The place looks finely.

Geo. D. Carleton has 25 acres, 1,000 orange trees, and 1,800 vines. His main crop yields him a large income.

E. B. Fessenden, from Rhode Island, has 5 acres, 150 orange trees, and a variety of deciduous and ornamental trees.

E. Caldwell has 20 acres, 1,350 orange trees, 400 deciduous trees, and 800 lemon trees, all looking well.

Judge Brown, a gentleman from New York, has a fine place about a mile from the business center. He has an orange orchard, 1,500 lemon trees, and 300 lime trees.

The above description of Riverside homes gives only a few that we had an opportunity to visit. In another article we shall dwell more fully on the methods of cultivation and irrigation practiced in the colony, and why a colony like Riverside can be successfully carried on when individual efforts sometimes fail.

J. C. P.

THE WOMAN'S EXH, to be held in New York City in 1883, in celebration of the hundredth year of *self-styled* independence, is an already assured success. Arrangements are made for grounds in Central Park—the finest in the world. Southern Californian should have one of the two commissioners for this State, and should go to work now and organize, and get ready to make an exhibit, either in connection with the State or as Southern California. Everybody knows what an immense benefit Kansas has derived from her exhibits at our Centennial, and Southern California should take advantage of Kansas' experience. We move that a meeting be called for Southern California, to meet during the week of our two fairs, to organize.

SEMI-TROPIC

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N. C. CARTER, GEO. RICE. } PUBLISHERS AND PROPRIETORS.

CIRCULATION . . . . 5000.

Mr. Carter, of the *Semi-Tropic*, went East in the interest of Southern California. We want more people to help grow vineyards, orchards, and other farm products. The inquiry comes from every direction for more information about our country, our soil, climate, etc., etc. Although we have sent over 40,000 papers to the East we find with each issue that the demand for more becomes greater and greater. Persons interested in Southern California and wishing information can address N. C. Carter, No. 2, Nesmith Block, Lowell Mass., or any of our agents as per address on this page.

California is said to be the Italy of the New World possessing a clover of beauty not inferior to that of the Latin peninsula, but, unlike that, not destined to be fatal in its attractions. The highest civilization will make one of its chief centers here. The capability of our climate, surpassing even that of Naples, will make this the favorite place of residence for thousands from abroad. They will fill the land with wealth, luxury and art.

SOUTHERN CALIFORNIA.

Chas. Nordhoff says of California: "After a thorough examination of this State, I believe Southern California to be the finest part of the State, and the best region in the whole United States for farmers. I have visited within twelve months almost every part of the State; and while the climate is mild, and the soil rich everywhere, the bright skies and the great variety of valuable products in the southern counties make that region, in my judgment the most eligible."

The testimony of Mr. Nordhoff, is the testimony of thousands of others, and the experience of many more.

Southern California produces a greater variety of products from the soil than any other section of the United States, and we might truthfully say in the world.

Southern California's productions come nearer perfection than those than any other country.

Much unnecessary disappointment and suffering may be avoided, if those who have determined to come to California should know exactly what obstacles they will encounter. It profits little an empty-handed man to stand upon a soil as fertile as it may be, and it is an aggravation of his poverty that the air he breathes only invigorates an appetite which he has nothing to satisfy. Labor is a drug when every man is a laborer, and where one's neighbor is as poor as himself. Yet the temptation of a free homestead attracts many men with dependent families into situations, where, without available means, poverty becomes actual destitution. Besides, the most desirable homesteads—not only in California, but in Nebraska, Kansas, Texas and the Territories—have been taken; and the further from a railroad, ship landing or town the new settler is, the more helpless he becomes. For this reason we would dissuade the settler who depends upon his labor for his living, and who cannot afford to remain idle for a year or two, from going any further than the point where he can secure work. The homestead area we spoke of in our last is, as we said then, only suitable for a colony or a number of families who will co-operate with each other.

The man who can take $1,000 dollars or more along with him is independent of circumstances, if he has only wit and sense sufficient to prevent himself from making glaring mistakes. The home that can be made with $1,000 is fully given in detail in another part of this paper by Mr. Wm. R. Ohlen, a gentleman of large experience and observation.

All other men excepting those with some money, as a rule, would find it better to keep from the frontier, and remain where they are; or not go so far out, but seek those places where land is cheap and where labor can be made available. Even for the man of moderate means, the lands remote from the business centers, or shipping points, schools, post office and church are not the best. Admitting he may procure a homestead free, its actual cost in five years—the time needed for its acquisition—will be more than of a tract within the limits of irrigable lands, convenient to markets.

Aside from the cost and time of improving a water right, the time lost in going back and forth for supplies, and in marketing his crops, will soon amount to the value of the land nearer markets and within reach of water privileges. The comfort to a man and his family of living near civilization will be an important consideration. If he should want to migrate to some new Eldorado, there are many chances to sell, where in the back country he can not do so; he must simply stay or abandon his improvements.

D. C. Hayward's nursery at Orange, has an orange bough in bloom seven months from the bud.

Orange, has by actual count, 135,260 orange trees in orchards, and this after a settlement of only five years.

SLOVENLY FARMING.

If we ever had a hobby it was in favor of neatness and order, and nowhere are these two qualities more essential or more profitable than on a farm. We would urge upon our farmers the necessity of more care and system in their farming operations.

Just now we have a protest, and a just one, from the millers and the Produce Exchange of San Francisco against the slovenly wheat farming of our State. This protest is but an echo of a similar complaint in Europe, and it is time our farmers were giving this matter serious attention. Ten years ago California wheat sold in Liverpool at an average of two shillings a quarter more than that imported from other countries; now it is worth two shillings less than that from Oregon and other countries. A depreciation of four shillings per quarter amounts to 17½ cents per cental, a loss which our farmers can easily remedy by a careful preparation of this cereal for market, and a little more attention to the production of a first rate quality of grain.

The yearly export of grain from California amounts to 20,000,000 bushels. This is now sold for $3,000,000 less than it would bring if in good marketable condition. This loss is frightful and ruinous to our wheat-growing farmers.

The causes set forth are shallow plowing and the planting of the same land in consecutive crops of wheat for many years.

Every farmer knows that such planting will produce a poorer quality of wheat, chaff and shriveled kernels being the result. We must sooner or later understand that even the rich and fertile lands of California, with our genial skies, will not produce eternally without proper cultivation and due attention to the rotation of crops. It is not the first crops from new lands that bring low prices, but, on the contrary, those from poorly cultivated exhausted lands. Adopt deep plowing, use fertilizers, and raise better crops and receive higher prices for your grain.

IN THE EAST.

The great demand for information about Southern California increases every day. To meet this demand to some extent, the publishers of the *Semi-Tropic* have established places in the principal cities where the paper can be had on application, or where any information can be had as to rates of fare, freight on household goods, and other information about California. Call on or address any of the following named gentlemen:

F. Knowlton, 287 Broadway, New York.
M. T. Dennis, 290 Washington St., Boston.
Geo. W. Cumins, 2 Nesmith Block, Lowell.
F. M. Fisek, 116 Market Street, Philadelphia, Pa.
D. E. Burley, 143 W. Baltimore Street, Baltimore.
A. O. Cusverin, 9 Atwater Block, Cleveland, O.
J. W. Morse, 57 Clark Street, Chicago.
J. F. Acker, 406 Pine Street, St. Louis.
J. D. Welsh, 129 Vine Street, Cincinnati.

We will answer all communications addressed to us in reference to California through this column. We will answer regular subscribers by personal letter, when stamps are inclosed for postage.

THE printer made us call "ensilage" ensilage and "Silas" Silas last month.

HOMESTEADER.—We answer you in full in an article elsewhere in this number. We do not advise any one to go on the homestead area we spoke of in the July number. A colony could settle on it, and, by co-operation, succeed; individual effort would fail. A colony from Illinois, who contemplate coming to Southern California, are going to investigate the subject, and as soon as they, or any other colony, are ready to locate, we will publish maps of the lands, and help the settlement along. Of course, you or any one else could join the colony.

ARIMNEY, ANAHEIM.—Hold your honey until later in the season, for better prices will certainly be realized. Honey is not nearly so plentiful as supposed by buyers; the yield throughout the East is short. A greater demand, and especially for California honey, will strengthen prices. If you must have money, you can store your honey with merchants in your city or in this, that will give you a liberal advance at a moderate rate of interest.

A. S. T.—We are most emphatically of the opinion that the raising of grapes for wine and raisins will be a paying business in Southern California. As for location, see articles in this issue; also see our March number, with Mr. Rose's article on grape culture. We will publish a grape and wine number about the first of December, which will be in time for practical work, and will fully answer all questions.

SUBSCRIBER, LOS ANGELES.—If, as you say, the agent induced you to subscribe for a book and lithograph by misrepresentation, and that the picture is not correct, you are not obliged to pay for it. We understand they have met with a great deal of such trouble in other counties. Our price for a better engraving is just one half the price you are to pay; our circulation five times as large; and the engraving can be used to print on letter paper or in a newspaper.

L. L. LESLIE, UTICA, N. Y.—The rates of fare and freight to Los Angeles you can obtain by writing to the nearest of any of the agents, whose addresses we give under heading, "*In the Field*." The difference of fare between coming direct to Los Angeles and going *via* San Francisco and the steamship line, is five dollars more *via* the latter route. You are entitled to first class passage on the ship.

MRS. HANNAH FALKIN ROBINSON, CANADA.—For rates of fare and freight by water from New York, address Pacific Mail Steamship Co., New York. Your route would be *via* the Isthmus to San Francisco (that line does not stop here). You would have to return from San Francisco to here by another line. Our port is San Pedro, or Wilmington, connected by rail (21 miles). Santa Monica is only seventeen miles by rail, but at present not a stopping place for ships. It may be by the time you come, as a wharf is now being built.

POPULATION.

COUNTIES.	1870.	1880.
Los Angeles, . .	15,309	31,086
San Luis Obispo,	4,722	9,061
San Diego, . . .	4,951	8,620
Santa Barbara, . .	3,988	7,800
Totals, . . .	28,970	56,484

Gains, 30,514; gain per cent., 105

The census shows that Southern California has grown faster than any other part of the State; that no agricultral county in the State shows a more healthy and steady growth than Los Angeles. It certainly speaks volumes for Southern California, that her wealth of rich lands should induce a larger proportion of settlers than any other portion of the Pacific coast, and yet our county is not known, comparatively speaking.

FRUIT PACKING.

In our February issue we gave advice as to the "preparation for market of the orange crop." The main points of which were, honest packing.

To gather the oranges, sort them as to size and quality, wrap each orange in a paper, packing them separate, and shipping your best fruit as first-class through and through, and get first-class prices. As an example we refer to Albert B. Clark, of Orange, who packed his fruit in first-class style, using a Japanese wrapper with the following printed on it.

This fruit is from the celebrated
YALE
ORANGE GROVE
It is warranted to be sound, juicy and sweet. Grown by
ALBERT B. CLARK,
Orange, Los Angeles county, Cal.

Mr. Clark received the very highest prices for his oranges, the extra expense of wrappers and printing paying well.

What is true of packing oranges for market is equally true of all fruits. Merchants who buy, and their customers, soon learn, that Mr. So and So's packages of fruit are as represented by the samples on top, the brand is soon established, and a handsome profit is made, and a demand established that is a reward for honesty, or let us call it good business sense.

The rule of honest assortment should hold good even if in some years not one package in ten can be branded A 1. The scarcer the fine fruits the higher the price they bring.

A man tells us that honesty in packing fruit is the best policy, as he has tried both.

Santa Monica, the Newport of the Pacific coast, is having a good share of visitors notwithstanding the cool weather we are having.

Climate.

WAR DEPARTMENT—SIGNAL SERVICE U. S. ARMY. Local Observations. Los Angeles, Cal., August, 1882.

Highest Barometer, 30.312, date, March 26.
Lowest Barometer, 29.872, date, March 1.
Monthly range of Barometer, 0.440.
Highest Temperature, 73.7, date, March 24.
Lowest Temperature, 36.0, date, 8th and 9th.
Monthly range of Temperature, 37.5.
Greatest daily range of Temperature, 23.5 deg., date, March 7.
Least daily range of Temperature, 10 deg., date, March 2, [illegible] and 21.
Mean of Maximum Temperatures, 62.7 deg.
Mean of Minimum Temperatures, 42.0 deg.
Mean daily range of Temperature, 20.7 deg.
Total rainfall, or melted snow, 1.45 inches.
Prevailing wind, N. E.
Total movement of wind, 3,[illegible].
Maximum velocity of wind and direction, 17 miles N., date, March 11.
Number of clear days, 16.
Number of fair days, 10.
Number of cloudy days on which no rain fell, 4.
Number of cloudy days on which rain fell, 3.
Total number of days on which rain fell, 5.
Dates of frost, March 5th, 6th and 19th.

FRANCIS S. MOTT, a gentleman of extensive travels in writing from Anaheim, in this county, to Mr. Nordhoff, the author, says: "You speak of the excessive heat. I do wish you and your family were in California, for a more perfect climate I can not imagine. Had I come to California instead of going abroad, today I should be a well man. Southern California presents a most gloriously invigorating tonic, and stimulating climate, very much superior to anything I know of, the air is so pure and so much drier than at Mentone, France, or elsewhere, and although it has those properties, it has a most soothing influence on the mucous membrane, even more so than the climate of Florida, and without the enervating effect of that. It is quite as stimulating as Minnesota, without the intense cold of that climate."

JOHN S. HITTELL, says in his *Resources of California*: "I am so much attached to California that I would not live contentedly elsewhere, and I imagine that neither the earth, the sky, nor the people of any other country, equal that of this State."

Dr. Wellwood Murray visited Southern Europe, Florida, South Carolina, and other places in quest of health, being afflicted with lung difficulties—he came to Southern California, bought a home, when he found the climate agreed with him—near San Bernardino, San Bernardino county, and has entirely recovered, and is today a strong man. The Dr. will again enter the field as an active business man, consequently his place is for sale (see ad. in another column).

Southern California is recognized as the healthiest part of the civilized world. People from every part of the world have come here, affected with bronchial disorders, and been benefited.

DEEP VERSUS SHALLOW PLOWING.

BY CHAS. COLEMAN, JR.

EDITORS SEMI-TROPIC CALIFORNIA: Dr. Conger's attack on deep plowing in the orchard has caused me to arise and say a few words in defence. I, too, have experimented, with great care, and my greatest success has come with deep plowing. By deep plowing, I mean from ten to fourteen inches. He places considerable stress upon the fact that the small surface roots are of much importance in the growth and development of the tree. Just here is where we differ in opinion, and that your readers may judge for themselves, I will add a few unquestionable facts concerning the subject. Now, in the first place, I agree with the Dr. when he attacks the subject of irrigation, for I need only to look about me for abundant proof of its vicious abuse. The idea of soaking trees for every two or even *four* weeks, I feel is a wrong one, which time only will modify. Neither would I be so radical as to try to take trees through the season without water, or with one irrigation only. The happy medium between the two extremes is most to be desired. Yet a rule for one section of our country might not apply in every particular to another; thus each locality is left, in a measure, to establish its own rules of procedure. In this section, forty or fifty miles from the coast, I find that from two to three good irrigations, followed by thorough cultivation with the plow, bring the most satisfactory results. With us, the ground in a week or ten days after irrigating will be dry to the distance of at least four or five inches, consequently of what good can a mat of small roots near the surface be to the growth of the tree. My aim is not to allow a root to grow within ten or twelve inches of the surface, and with a mulch of loose soil to that depth, moisture is retained for a long time, and no roots ever suffer from the want of it; while, on the other hand, the mat of small roots near the surface revives only for a short period at each irrigation, and then relapses into an inactive, dormant state. Pray, of what permanent good are they to the tree? Again, if you endeavor to tear those surface roots, you will be obliged to pass the ground over with shallow cultivation, your soil mulch will be thin, and, as a natural consequence, you will soon be irrigating again. I speak not from a theoretical standpoint, but from a practical one. My observations are founded upon careful, well studied experimenting, and as to success, I have only to point to my own orchard, which, I am happy to state, does not contain a diseased member; and as to growth, I challenge anybody to show anything better.

Now, then, it has not been my desire in writing this article to cross swords with Dr. Conger, for well do I know his ability with the horticultural lance; but I wish to show that while one mode of cultivation may be best in Pasadena and along the coast, this locality and others farther inland will obtain the best results by pursuing a course altogether different. Nor am I sure that the Dr.'s theory is even best for his locality. Has he tried deep plowing with the same care that he has given shallow cultivation? I would not advise a man having large trees with surface roots to start in and tear them out with the plow. Certainly, such a thing would not be advisable; but to one putting out a young school, or now having young trees, I would say, by all means do not allow surface roots to grow. You will only need to keep them off for a few years, for then your tree will have grown an immense network of roots beyond the drying surface, less water will be required, your tree will be less liable to disease, because no roots will ever become dry; and as to profitable returns, I would add that the never-failing rule of nature will attend your labors. Another word, and I am done. Dr., I understand, advocates frequent cultivation, on the theory that the soil will collect moisture from the air. Again, I admit that the theory is good; but the practice here and in San Bernardino county is ruinous. The air is so dry with us in mid-summer that land stirred during the day will certainly not gain any moisture at night, and it has been ascertained by some that it even loses. I have observed that, after irrigating, it is best to plow ten or twelve inches deep, narrow furrows, and with care to leave the ground very smooth, and with this allow the ground to rest until you are ready to irrigate again. If weeds come, cut them down with a hoe, or, what is still better, pull them up, and then you are done with them. If you have worked your soil properly during the winter and spring, you will not be troubled with weeds, or at most with only a few. I do not ask anybody to follow my plan of operation, I merely state it, with its accompanying results, and all are free to follow any course which they may choose; but I would consider it a favor if I could hear from those who have practised a different mode with success, through the columns of your journal. My aim is to find the most rational way of growing the citrus family, especially the orange, consistent with nature and her requirements; consequently, anybody speaking on the subject will find in me a ready listener.

POMONA, June 21.

Los Angeles City Bonds in San Francisco are offered at 102 with 100 bid. Los Angeles County Bonds 102@104.

While the plains for the most part are dry and brown with the "sear and yellow leaf," the trees, grass, vines and shrubs in the mountains are green and fresh and pasturage for cattle and sheep is splendid.

The contract for erecting the first building of the Southern California University has been let, and the work is being rigorously pushed. School will be opened about October 1st in the new building.

BUY A HOME.

[Lines suggested on reading the speech delivered by the Hon. George Barstow, on the 25th of September, 1878, at the Metropolitan Temple, San Francisco, to raise funds for the relief of the sufferers by yellow fever at the South.]

Buy a home, buy a home,
In the land rich with the clustering vine,
The laurel, bay and silver pine,
Where the honeysuckle's radiant spray
Allures the humming bird all day;
Where the wild live yields its treasures free,
And fruit falls from the burdened tree—
Buy a home.

Buy a home, buy a home,
In the town, or camp, or forest shade,
Wherever thou thy choice hast made,
There, through earnest work add honest aim,
The great highroad to wealth and fame.
From the one resolve turn not aside,
But first and last, whate'er betide,
Buy a home.

Buy a home, buy a home,
Where the south wind woos for their perfume
The wild rose and alfalfa bloom;
Where the jasmine and clematis climb;
Where grow the wild mint and the thyme;
Where the wide and far expanding plain
Displays its wondrous wealth of grain—
Buy a home.

Buy a home, buy a home,
Let the reaper in the early morn
Begin the chorus in the corn;
Let the ploughman shout it to his team,
The frugal wife make it her theme;
Let the artisan take up the strain,
And pass the watchword on again—
Buy a home.

Buy a home, buy a home,
Let the halls of learning in it find
A thesis for the rising mind;
Let the parent to the child reveal
The meaning full of the appeal;
Let the camp, the court and council hall
The words proclaim to one and all—
Buy a home.

Buy a home, buy a home,
Where the monarch cedar spreads on high
Its branches in the azure sky;
Where the mountain lake, to nature true,
Reflects the far off heaven of blue;
Where the forest's minstrels all day long
Their joyous melodies prolong—
Buy a home.

Buy a home, buy a home,
Let the preacher preach it o'er and o'er;
'Twill fill the church from roof to floor.
Let the doctor, as the friend of man,
Prescribe the words whene'er he can;
Let the lawyer, as his brief he draws,
Imborne upon his client's cause—
Buy a home.

Buy a home, buy a home,
Let the poet weave it into song;
The orator the theme prolong;
Let the youth just turned to manhood's prime
Join in the chorus of the time;
Let the plighted, trusting maid draw near,
And whisper in her lover's ear—
Buy a home.

Buy a home, buy a home,
Where the splendors of the cataract rise
To bear its greeting to the skies;
Where the cascade glides down steeps of green,
Enchanting all the sylvan scene;
Where the zephyr steals from sunlit bowers,
To chase the stream thro' reeds and flowers,
Buy a home.

Buy a home, buy a home,
Let the financier note down with care,
The words mean profit everywhere;
Let the public press, the people's guide,
Still pass the watchword fore and wide;
Let the legislator seeking fame
Reform the land laws and proclaim,
Buy a home.

Buy a home, buy a home.
Let the words throughout the land resound
Until for all a home is found,
Let the watchword ring out loud and long;
Let wind and wave bear it along,
Till the mountain, valley, lake and plain
Re-echo o'er and o'er again;
Buy a home.

Buy a home, buy a home,
Where the deer bounds up the green hillside;
Wher the herds roam o'er the prairie wide;
Where the pale face never yet has strayed,
In valley, den, or glen, or glade;
In thy realm of beauty everywhere,
Oh! Golden West, repeat the prayer
Buy a home.

Havre (France), June, 1880. J. B. H.

TROUBLES AMONG TOURISTS.

Mark Twain, in his new book, called "Tramps Abroad," tells how a party of tourists got wet, and what they did when they came back to the hotel: "We stripped and went to bed, and sent our clothes down to be baked; all the horde of soaked tourists did the same. The chaos of clothing got mixed in the kitchen, and there were consequences. I did not get back the same pair of drawers I sent down, when our things came back at 6:15; I got a pair on the new plan. They were merely a pair of long, white ruffled cuffed sleeves, behind and had pockets in it for the shoulder-blades, but they did not seem to fit me, so I found it a sort of uncomfortable garment. They gave my bob-tail coat to some one else, and sent me an ulster suitable for a giraffe. I had to tie my collar on because there was no button on the foolish shirt which I described a little while ago.

Carp Culture in California.—A correspondent of the *Pacific Rural Press* gives his experience in the culture of the carp, which, to say the least, is very satisfactory to him, and encouraging to all who may desire to grow this kind of food. In January, 1876, he bought six carp, one of

Residence of R. N. Vail, Los Angeles Cal.

ENGRAVINGS.

The engraving on this page is a fair representation of the beautiful home of our fellow citizen, Hon. R. N. Vail, a gentleman who came to Southern California a few years ago from England, after traveling the world over in search of health. It is our intention of making another engraving soon that will more correctly represent his beautiful place, showing the beautiful shrubbery and its wonderful growth. Mr. Vail certainly found the climate of Southern California conducive to good health when he has so built such a substantial and beautiful home.

hitched together with a narrow band, and they did not come down to my knees. They were pretty enough, but they made me feel like two people, and discommoded at that. The man must have been an idiot to get himself up like that to rough it in the Swiss mountains. The shirt they brought me was shorter than the drawers, and hadn't any sleeves to it—at least it hadn't any more than what Mr. Darwin would call rudimentary sleeves; these had edging around them, but the bosom was ridiculously plain. The knit silk undershirt they brought me was on a new plan, and was really a sensible thing, it opened

which soon died. The first year he raised 2,041 and in 1877, 2,672, from the same five fish. In 1878, he disposed of two of the old fish and reared 4,000 from the remaining three. The crop for 1879 has not yet been put into figures. The four fish ponds cost $50 each, first cost of fish $30; feed $10; total, $240. He has sold $115 worth of fish; and has from 6,000 to 8,000 carp in his ponds, besides his family have been eating carp for the past 18 months. The ground devoted to this industry is about a half acre, and it is to be remembered that it was wet, waste, and comparatively worthless land at that

Viticulture.

VITICULTURAL COMMISSION.

MEETING AT SONOMA.—INVESTIGATING THE PHYLLOXERA'S RAVAGES.—REMEDIES SUGGESTED.

From that sterling "Agricultural Daily" the *San Francisco Bulletin* we condense the proceedings and results of the first meeting of the Viticultural Commission, commissioned by the Governor under authority of the State Legislature.

Whilst we are not in any dread of the much dreaded pest it is better to be prepared, as to be "Forwarned is to be forearmed."

The meeting was full of interest and largely attended, being represented by the viticulturist of that section as well as the commissioners, newspaper reporters and Mons. de Lacutelle, agent of the French Government.

FIRST APPEARANCE OF PHYLLOXERA.

First discovered in 1866 in the vineyard of Mr. Goess, near the village of Sonoma. From this point it has spread up and down the valley about nine miles and a width of one and a half to three miles.

The rate of progress of the insect is not very rapid. In many localities from six to eight rows of vines had sickened since last season. It has taken a period of fifteen years to traverse a distance of nine miles, which is a slower rate of progress than is made in France, when it has been known to spread a distance of sixty miles in one year. This slow rate of progress is thought by Professor Hilgard and others to be due to the absence in this section of the winged form of the insects.

Rich soil, poor soil, old vines and young vines all attacked the same, the stronger vines and deep soil only holding out the longer.

RESTORING NATIVE AMERICAN VINES.

After years of investigation the French have found that most American vines resist the attacks of the insect to a certain extent.

The roots of the *Vitis Californica* vine growing within a few feet of the European vines that had been killed were not affected, and under careful microscopic inspection no Phylloxera was discovered.

It is believed that the California vine is entirely resisting.

The grafting of cuttings before planting is not advised as a large proportion of the grafts fail to grow, but to insert the grafts after the cuttings have stood one year and made roots either in nursery rows or the vineyard.

Mr. Hill gave an account of the history and progress of the ravages of the insect in the valley since 1873. It was found in eight different vineyards and pronounced Phylloxera by Prof. Riley.

A REMEDY.

Mr. Hill favored the most rigorous measures, and rooting out vines that showed any signs of being affected. By this means he saved his own vineyard and in doing so had to dig up only fifty vines from a fifty-acre tract. He will continue the same treatment, and is sure that in that way he will postpone the fatal day when his vineyard will be destroyed.

Sickly vines are the nurseries and pest-houses where the insects is propagated and should be destroyed.

WINGED PHYLLOXERA DISCOVERED.

Later investigations show that the winged Phylloxera has been discovered, and some alarm occasioned. We believe active and immediate measures should and will be taken to uproot all the vines that have the least indications, and burn them on the spot.

ST. HELENA VITICULTURISTS.

At the last meeting of the St. Helena Viticulturists, the following questions were submitted for discussion.

What is gained in planting rooted vines instead of cuttings?

Why not plant vines say, 8x3½ feet apart on light soil?

What is the cause of partial failure of cuttings to grow this year?

Why top vines? Is this not mutilation?

Nearly all agree that generally after rooted vines and cuttings had been planted one year, the difference could not be distinguished. The general conclusion arrived at was that, conditions alike, there is very little difference. Rooted vines might start more readily and be of surer growth, but cuttings well selected and properly treated are about as good. On hill-sides, roots do a little better; on level land cuttings are just as good. The main point to be observed was to plant a good sound cutting, and have the soil in good condition. Regarding the partial failure of cuttings this year, the unanimous opinion was that it was caused by the excessive rain and cold of the early spring, followed by the subsequent dry north winds. Lewelling said he would not plant vines in December or January. About the month of March was the best time. Thompson planted cuttings in the middle of March and they did well. It is not best to plant to early.

The objection to planting vines about 8x3½ feet apart is, first, that three and a half does not admit of room to cultivate, and, secondly, the vines are too close to afford proper nourishment—they should be about 7x7 and never any closer. In hillside terracing they can be planted 10x4.

Krug says that wholesale slaughtering by topping and slashing vines off by the foot is wrong. It is injurious to cut too late or too much. Only cut off a small point to induce lateral and discourage terminal growth. In summer prune early, not to late. If late it hurts the color of the grape. Crabb did not top any this year, and only a little last year. Dr. Crane does not think the pruning plan influences phylloxera. Pruning existed thousands of years ago, phylloxera only recently. Lewelling goes between the two extremes: says "modern pruning does not hurt." Makes it a rule that when a vine starts bunches, to leave four leaves beyond the last bunch and there cut off the branch. This rule followed in topping, our vines would not be injured. General opinion, excessive pruning or topping is injurious, moderate is beneficial.

Black Knot.—Crabb was asked if he had noticed it. He said yes, was very common; was caused by an outside injury in hoeing or cultivating. The bunch was formed by the escape of the sap. He cut them off in winter time when pruning, and they heal over.—*S. F. Bulletin.*

DRY WINES.

The appellation, dry wines, is a term used in all wine-producing countries as a kind of an old revination. It is applied to those wines where the sugar in the must or juice has been thoroughly fermented, that is to say, that all the grape sugar has been converted into alcohol, and in time has combined with the other component parts of the wine. Equality of the ingredients in the must or juice facilitates the fermenting process. Any wine which becomes turbid by exposure to the air or at a higher temperature, cannot properly be called dry, for the simple reason that there still remains sufficient unfermented grape sugar to cause the disturbance. If our vinyardists would manage the gathering of their grapes as horticulturists do their fruits, picking only the ripe ones for a certain purpose and let the others remain for the next gathering, instead of letting the best part go to evaporation or concentration, the result for dry wines would be much more satisfactory than it now proves. Our climate is certainly such as to warrant the early and complete ripeness of every fruit, and should not be compared with less favored climates where the ripening of the grape particularly goes on much more slowly—sometimes not arriving at maturity till late in the season, and perhaps not then. To produce light dry wines, sound and perfectly dry, it requires knowledge, care and time, and if there is any art in wine-making, it concentrates on this point. Wines ripe for bottling and which, when bottled, may be stored away for any length of time without making any perceptible sediment require extra labor, care and patience. The idea, entertained by many people, that a light dry wine, well matured and three or four years old, should be sold in the market at the same rate as others scarcely six months from the press, shows how little they know of the losses and expense by evaporation, laxation, storage, etc.

Cut all water sprouts from fruit trees now, while they are young and tender, and it will save trouble hereafter.

Light wines are used at the meals of the workingmen of France, and are becoming more popular in this country. Wines at our meals and not over a bar, would be an improvement.

GRAPES IN THE FOOTHILLS.

CALIFORNIA LANDS ADAPTED TO THE CULTURE OF THE VINE.

For grape culture, the foothills offer a soil and temperature which are admirably adapted to it. The best raisin grapes in this country are raised at Pasadena, and we have no doubt that vineyards planted on the extensive bench which forms the base of the Sierra Madre would thrive splendidly, and perhaps give us a wine grape superior to any we have yet developed. The wild grape grows profusely in all the canyons running through the foothills, a good sign; and Arpad Haraszthy has placed himself on record as of opinion that a good wine grape can be raised wherever chaparral grows, and we know that our unoccupied foothills are densely covered with that class of vegetation. Whether there is any large amount of public lands in the foothills of this county which is open to pre-emption, we are not prepared to say; but we believe that any one who wishes to secure a vineyard site on this belt can do so at a very small cost per acre. Springs are easily developed at the base of our great mountains, and as the vines only require irrigation the first year, there are few places that would not afford the water necessary to start their growth. With the fine prospect for grape growers in future there is no excuse for wasted energy hereafter in Los Angeles County. Any man who has pluck and industry can find a patch of ground suited to the growing of grapes. He will require less capital to bring a vineyard into maturity than to successfully engage in almost any other kind of agriculture. At the prices that will rule hereafter for grapes, a vineyard of twenty acres will afford its owner a handsome income. The crops are sure. They never fail here. They may be more abundant one year than another, but never a total failure, as has been the case with other crops. We have directed attention to our foothills in this connection, not so much because they are more desirable than the valley lands, but because they rule cheaper; and a home can be more readily secured on them than in the valleys. We should like to see every uncultivated space in the country devoted to grape culture. That is to be really the great source of wealth hereafter to our people, and as there is no limit to the market for the juice of the grape, there is no danger that the industry may be overdone.—*Express.*

CHARES IN THE FOOTHILLS.—Wild grapes are found growing in great abundance among the foothills of the Cahuenga Range. The soil, which is generally of a deep reddish loam or adobe, seems well adapted to grape culture. The ground is generally sufficiently moist to require no irrigation. Los Angeles will some day gather her finest grapes and brand her best wines from the foothills. These lands are very cheap, much of them still belonging to the Government.

DESCRIPTION OF WINES

Dry Red Wines—Varieties from Mission grapes and a finer grade of the Zinfandel and others; the latter equal to any Burgundy, and Red Concord and Cynthiana, etc., better known as native claret, finer than the imported clarets.

Angelica—A fine ladies' wine, rich and naturally sweet and valuable in the sick chamber, as it makes fine whays and jellies. It is a good dessert wine, and well adapted for communion purposes.

Muscatel—A light-colored, highly aromatic wine. Very similar to the celebrated "Tokay." A great favorite on the table as a dessert wine.

Port—Deep red color, fine flavor, and in many respects similar to the red wines of Portugal. Very superior in cases of sickness, being of pure juice of the grape.

Sherry wine—For dessert wine there is none finer.

Sweet Catawba has become a national wine. It is heavy, finely flavored, and will keep in every style of package, in any climate.

Dry Catawba now ranks with many of the better grades of Rhine wines, and is often preferred on account of its superior, fine, fruity flavor. It is slightly acid, and not so heavy as the sweet Catawba, and requires more careful handling.

Grape brandy is a pure distillation from the wine. Its purity in all respects makes it a valuable medical agent—equal to the best foreign when mellowed by age.

Belt wines are made from grapes grown in the "Isothermal" or "Frostless Belts" of Western North Carolina.

Minolo wines are made by limiting the quantity of grapes grown to a few bunches of the vine, thereby increasing the bouquet and flavor, viz., improving the quality at the expense of the quantity, and, of course, can be produced in any section of the country.—*American Wine and Grape Grower.*

LOS CERRITOS RANCH.

EDITOR SEMI-TROPIC CALIFORNIA: Among the number of large ranches that are still used almost exclusively as stock ranges in the great Los Angeles Valley, there is not a finer one than the Los Cerritos, owned by the Bixby Bros., situated between the Old San Gabriel and Los Angeles rivers on the west, and the New San Gabriel River on the east, it lies within the best artesian belt of this splendidly watered valley. The ranch extends from the sea north, half way across the plain, about ten miles. This magnificent estate contains 25,000 acres of rich grass-producing land, most of which is green all the year round with the native grasses, furnishing excellent feed for the thousands of sheep and cattle that are kept here all the year. About one third of the ranch is mesa, or table land at the south end fronting on Wilmington Bay. Alfileria and burr clover are the grasses that thrive best on those lands during the winter and spring months, while on the upper plain, where the soil is more moist during the summer, the wild rye and other native grasses grow luxuriantly.

During a pleasant drive over the ranch a few days ago, with one of the owners, Mr. Lewellen Bixby, I had an opportunity of seeing much that was interesting, and learn what these enterprising gentlemen are doing in stock raising in Southern California. Twenty-five to thirty thousand head of sheep, and several thousand head of cattle are kept here the year round. A field of 1,000 acres, on the east side, is surrounded with a fence, which is the pasture of a thousand head of cattle this summer. The sheep are herded in bands and have corrals where they are guarded at night by the herdsman. In our drive we passed half a dozen or more of these sheep camps at different points on the ranch, where we saw flowing artesian wells. These wells, Mr. Bixby informed me, average eighty to two hundred feet in depth and have always flowed abundantly ever since they were bored. Some of them form brooks that run for several miles across the plain. One of these near the mesa is strongly impregnated with sulphur and flows a large stream.

On the mesa, by the sea, six hundred acres of wheat and barley were raised this year that will yield an average of twenty bushels per acre. Wheat has been raised here now for three years in succession, and has always yielded a paying crop when the seed was sown in good season. Last year, one of the renters who had 200 acres in wheat on this mesa cleared $1,200 on his share of the crop. Adjoining the mesa, on the bottom lands of the Los Angeles River, is a settlement of farmers principally engaged in raising corn. There are about twenty families in the settlement, who have a thousand acres under cultivation. The corn looked as fine as any I ever seen, and will yield, at a fair estimate, have 50 to 75 bushels per acre; and there are thousands of acres more on this splendid ranch that will produce equally as well.

It will not be many years before lands like these, that will produce such crops of the cereal products, and the great variety of fruits that grow to perfection in the Los Angeles Valley, will be too valuable for sheep and cattle range, and will become the happy homes of the farmer, dairyman and orchardist. There is even now a prospect of a part of this fine estate being segregated into small farms that will be offered at prices and on terms that will be very advantageous to all who may seek this fertile valley and delightful climate to make a home. The enterprise, if carried out as contemplated, would make it a noted settlement, afford pleasant and profitable homesteads for the purchasers of the lands, and add wealth and a most desirable population to this fairest valley by the sea. Perhaps by the next number of the SEMI-TROPIC, a more definite statement of the undertaking can be given.

W. E. WILLMORE.

Subscriptions for the SEMI-TROPIC CALIFORNIA are only $1.50 per year.

THE OLIVE, AND WHAT IS SAID OF IT.

BY MRS. FLORA M. SIMPSON.

SAN DIEGO County, California's last stronghold of skepticism regarding its agricultural and horticultural capacity, has come to the front as a semi-tropic, fruit-growing county. Its oranges and lemons have gone abroad, and won their claim to superior excellence; but its biggest destiny is evidently to distinguish itself as the best olive producing county of the State—or the United States.

Many orchardists throughout the county have planted a limited number of trees and cuttings by way of experiment, but those who have engaged in the enterprise most extensively have planted within one mile of the bay, where there are no extremes of heat or cold to check their growth. The tender twigs turn toward the sea for the nutriment afforded by the ocean breezes.

The adaptability of this locality to the culture of the olive was recognized by the Department of Agriculture in its report of 1877, in which special mention is made of San Diego, and this further reference to other sections. "The countries which grow the olive for purposes of commerce present conditions of latitude, soil and climate similar to a number of the Southern States, and a portion of the Pacific coast."

At remote intervals of time, the importance of establishing an industry in this country, by which millions are sustained in the Old World, has occupied the minds of intelligent men, and some effort has been made in that direction, but, from various causes, most of them have failed. In the path of failure, however, we find the proof of the feasibility of the enterprise.

During the residence of Thomas Jefferson in France, as Minister Plenipotentiary to Europe, he became an enthusiast on the introduction of the olive into this country, and being an advanced agriculturist, with the best opportunities for observation, his opinion, so clearly expressed in the following language, might to have weight with those less capable of judging in the matter: "Although the olive is the tree least known in America, it is the most worthy of being known, and of all the gifts of Heaven to man, next to the most precious. Having been myself an eye-witness to the blessings which this tree sheds on the poor, I never had my wishes so kindled for the introduction of any article of new culture into our own country.

In 1817 Congress appropriated a tract of land in Alabama to French emigrants, for the purpose of cultivating the olive and grape, but the scheme failed, and the land reverted to the Government.

In 1776 the olive was introduced into South Carolina, and in 1829 olive seeds were planted in the same State, where the trees are still bearing.

In 1768 a colony of Greeks settled in Florida, and brought with them the olive, to add to the many products of the State.

The same year the Mission of San Diego was founded, and an olive orchard planted. The policy of the Mission founders in planting this useful tree was a wise one. About a dozen missions were supplied with olive trees, where most of them, and possibly all, still yield a fair supply of fruit, notwithstanding neglect and the ravages of animals.

In 1872 Kimball Brothers set their first few cuttings, procured from San Diego Mission, on National Ranch. They have each year added to the number, and they have now five thousand trees in orchard, and from eight to ten thousand in nursery. Two thousand are this year fruiting. They come into bearing the third year; the fourth, an average of two gallons of fruit to the tree is obtained; the fifth year, so rapid is the growth of the tree, the quantity is doubled. In a few instances the yield is much greater. From one tree, four years from the cutting, eleven gallons were picked, and twenty gallons from one seven years old.

The apathy among the masses, regarding this industry, arises from a lack of knowledge of the many uses of the products of the tree, and a doubt of the practicability of its culture in this country.

The testimony of good authority on both these subjects is ample, a portion of which we cannot forbear quoting. In the report of the World's Exposition at Paris, in 1867, this reference is made to the olive and its uses: "Oil, in some way or another, plays a most important part in the domestic economy of Europe. A large portion of Southern Europe would perish, were the olive crop to fail. Real olive oil has for centuries partly taken the place of meal and butter, with large and intelligent populations."

Robert Chisholm, a cotton planter of Charleston, S. C., procured trees from the American Consul in Italy, and cultivated three or four hundred, without making it a specialty. He says: "Olives are eaten greedily by cattle, sheep, hogs and poultry, and for feeding any of the above stock, would pay handsomely to cultivate the trees. For several winters I kept a small stock of hogs in fine order upon the ripe olives, daily shaken down for them." They imparted a flavor to the flesh of swine, not acquired from any other food.

Cronise, in his "Natural Wealth of California," says, in reference to San Diego Mission: "In the experience of over sixty years, there has never been a failure of the olive crop here, whereas in Europe it often fails, and the fruit suffers injury from elemental causes. From the universal excellence of our olives, we may depend upon their preference abroad, and for the same reason, it is probable that the oil will be alike superior. The oil of olives is almost universally used in cookery in many parts of Europe, and it would certainly be adopted here, also, if it could be had fresh from the manufactory; it is more wholesome than lard, and cheaper than butter."

Mr. W. G. Kimball exhibited pickled olives at the February meeting of the State Horticultural Society, which were given to an expert, Rev. Father Blensdub, for comparison with foreign samples. The best French and Spanish olives to be obtained were tested with these, and the San Diego olives pronounced in every respect superior.

This testimony is general, even among those who have been accustomed to eating them in foreign countries, thus giving added weight to the theory that portions of the Pacific coast are better adapted to the culture of the olive than the countries bordering on the Mediterranean.

W. B. Ewer, of the *Pacific Rural Press*, in the issue of Feb. 14th of the present year, writes understandingly and clearly of the great value of olive growing in San Diego county. He claims this as its "natural home," and says, "there is no industry more peculiarly adapted to San Diego than the cultivation of the olive for either oil or fruit."

At the East, where the olive is most successfully grown, the mean temperature of the year is between fifty-eight and sixty-six degrees, while the mean annual temperature of San Diego is sixty degrees, which, coupled with a dry atmosphere, freedom from fogs, light rain-fall and proximity to the ocean, confirms Mr. Ewer's conclusion—"the natural home of the olive."

We have only glanced at the chief uses of this most valuable tree. There are many others that may well enter into the account in considering the question, "Will it pay?"

Every sprout or limb pruned from the tree adds to the annual income in cuttings, which are placed in nurseries to be transplanted into orchards in two years. Twigs too small for this purpose are useful as kindlings, for every part of the tree, even the pits of the fruit, are permeated with oil that renders them combustible. The wood of the tree, and especially the root, which is beautifully clouded, is held in high estimation for mechanical purposes. It is susceptible of the highest polish, and before marble came into use, was used for sculpture, on account of its density and durability. After the oil is expressed from the fruit, the pomace is excellent food for fowls and swine. In short, the olive tree seems to have been created for pure use. There is room in Southern California for millions of trees that would add millions to the wealth of the State.

This industry cannot be overdone, for the markets of the nation are open to us. Let every agriculturist, where there is a possibility of success, plant a few olive trees—not in a random and careless manner, but thoroughly and well—to point the localities where this work may be prosecuted most successfully.

NATIONAL RANCH, SAN DIEGO CO.

California's wool clip this year will reach 55,000,000 pounds. The value in dollars and cents will be about double that of any previous year.

AN INSTITUTION OF LOS ANGELES.

ONE of the pioneers of '49 to California, who has done a great amount of good for the State as an industrious miller, lumberman and shipper, and a man who has done much for Southern California in forwarding public enterprises, is Mr. J. G. Jackson, whose name is connected with our extensive lumber firm,

JACKSON, KERCKHOFF & CUZNER.

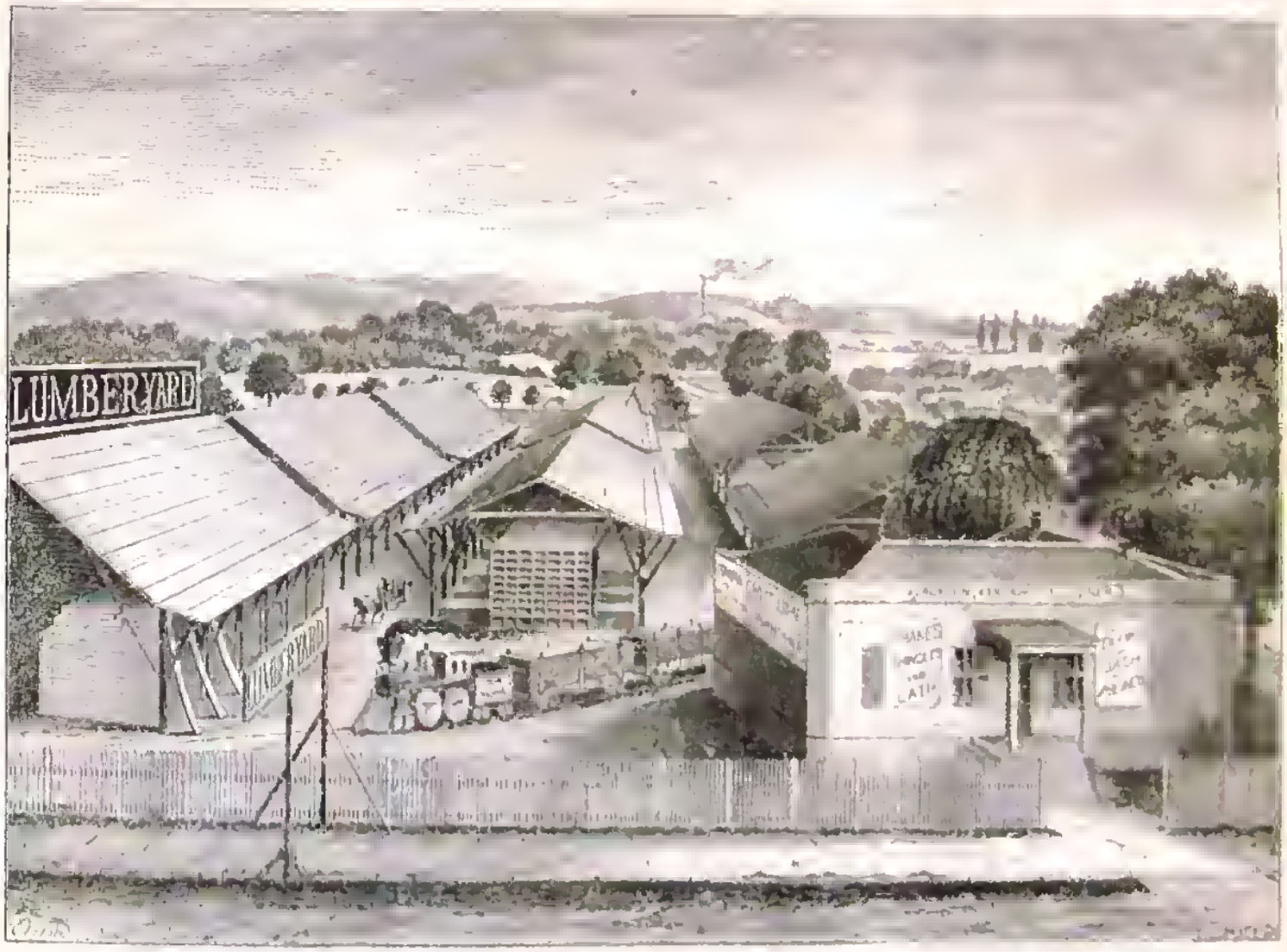
Mr. Jackson started the lumber business over twelve years ago at San Pedro, on the present site of the Pacific Steamship Company's wharf, from which he supplied the Southern country. On the completion of the railroad from Los Angeles to Wilmington, he moved the yard to this city, locating on the corner of Main and First streets, where the Los Angeles Furniture Company now do business.

With the rapid growth of the country, more room was wanted, and the yard was moved to the corner of Alameda and First, where the business continued, increasing under the able management of Mr. W. W. Robinson, our present efficient City Clerk, ably assisted by Mr. James Cuzner, who came here in 1874. In 1877, Mr. Robinson was elected City Clerk, and Mr. Cuzner took full charge of the business in this city. Two years later, the firm was reorganized, Mr. James Cuzner and Mr. W. G. Kerckhoff taking an interest in the business, which had so increased that the new firm had to look up more commodious quarters. Recognizing the fact that lumber to suit all classes of building in this climate should be stored so as to protect it from the sun and rain, thus securing a better quality, and making quite an item in the freight bills of all shippers who bought their lumber of them, they bought the grounds where they are now located, at the corner of Alameda and Macy streets, next to the Sisters of Charity, erected mammoth sheds and buildings, as represented in the engraving on this page, under which to store every foot of lumber, building a railroad track, and grading and graveling roads through the yard, making a model establishment for convenience and rapid handling of their stock.

In addition to their lumber stock, they carry everything that goes into the construction of a house; doors, blinds, windows, Santa Cruz lime, plaster, hair, cement, etc.

Another very important element in any business is to avoid the payment of tribute to middle men. This firm are the owners of large tracts of fine timber lands in Mendocino county, with one of the finest mills on the Pacific coast, located at Caspar Creek. The mill turns out about 50,000 feet of lumber per day, the bulk of which goes to San Francisco, where Mr. Jackson has his headquarters and gives the business his personal attention.

The Los Angeles yards are presided over by Messrs. Kerckhoff and Cuzner, two active young men thoroughly posted in the business, and well and favorably known in business circles, as sterling business men. Their business embraces sales from the smallest bill to a train load, the small buyer receiving the same consideration as if he was a large purchaser. Under their able management the business will continue to prosper in the future as it has in the past.



JACKSON, KERCKHOFF AND CUZNER'S LUMBER YARD, LOS ANGELES.

Mr. Hayward's five-year-old lemon trees yielded him this year $8 per tree, at that rate 100 trees to the acre would be $800. This land sold five years ago for $50 per acre. You can put your own estimate on its worth as improved.

A HOME.

How to Get One—What it Costs—Girls Wanted.

Editors Semi-Tropic: Los Angeles County has long been famous for her capacity for the production of both semi-tropical fruits—such as oranges, lemons, limes, figs and grapes—and also for the whole range of the fruits of the temperate zones; but those who purchase land and set out plantations of these various fruits require considerable capital, which must be invested at the start, and must, in addition, have the means on which to live whilst they are waiting three four and five years, until the plantations become productive and return an income. And as the greater part of the immigrants who reach California are men of small means, they must necessarily seek a country where their labor will produce them *an immediate return*. The first consideration with them is *food, shelter and clothing* for themselves and families. If they come here, they must be satisfied beforehand that their families will not suffer from want of the necessaries of life—the luxuries they can wait for, but a comfortable living they must have. Now, here is just where Los Angeles County has the advantage over other sections of this State, particularly the northern portions. Here it is abundantly proved by numerous instances, that five acres of irrigable land are ample for the support of a family. Plant, say, two acres in alfalfa, two and a half acres in vegetables, potatoes, and grain for poultry, reserving half an acre for the house, corral, etc. The alfalfa will yield its first crop in three months from the seeding, and can be cut monthly afterwards, and will afford abundant food for five cows, which should certainly yield an average of one pound of butter each per day during the year. This is not a large estimate, when it is understood that these cows are to be fed a full supply of the most nutritious of fresh, green alfalfa all the year. I will suppose that this butter, if it is well flavored and properly made, will average 20 cents per pound by the year—not a large estimate, as, although butter falls lower during the spring and early summer, it is fully as much higher during the fall and winter; besides, the Arizona market will hereafter afford a steady market for all our surplus. In addition to the cows, 100 good hens should be kept, principally for their eggs, which pay much better than poultry, make an immediate return, and cost less for transportation. But poultry also pay, and large quantities are annually sent from this county to San Francisco, where they command the highest prices on account of their extra good quality, as very few families raise any but the very best breeds. All varieties of poultry—turkeys, geese, ducks, and chickens—are perfectly healthy, and are raised without any difficulty. One hundred hens of good laying breeds, if properly cared for, will easily average three dozen eggs per day for the year, and certainly average twenty cents per dozen by the year. These two items—the cows and the hens—will by this calculation return an income of $584 per year, with the advantage that this is an *immediate income*. I have made no account of sales of calves or poultry, or of the hogs, that can be fattened on the sour milk, slops from the house, and roots and other produce from the garden, the returns from which would serve to increase the income, or at all events to supply any deficiency that might occur. As most immigrants are men with families, after the place had been started, the business could be left to the care of the wife and children, and the father could seek employment at good wages away from home, and what he thus earned could be applied in the purchase of more land. In two or three years he could, from his wages alone, be able to purchase at least 40 acres, which he could devote to plantations or such other crops as he should find to be most profitable. And now comes the question, how much capital will be required to purchase, put in cultivation and stock the five acres of land upon which he is to make his home. If the land is to be watered by a ditch, he would probably have to pay for land and water right from $75 to $100 per acre, and afterwards pay so much for water per hour whenever he wanted to irrigate. In addition, he will be liable for assessments to pay current expenses, if the sales of water are not sufficient to do it, and also for repairs and breaks that are always liable to occur. A man who gets water from a ditch never knows what his water costs him until the end of the year. Still, on certain lands ditches are indispensable, that bring the only way in which water can be got, and water must be had on those lands, no matter what it costs, or cultivation must cease. In my opinion, the best lands for the poor man, on which to locate his home, are the moist and fertile valley lands in the Santa Ana and San Gabriel valleys, either in or adjoining to the flowing artesian well belt. These lands being naturally moist, only a small quantity of water for irrigation is required, and then only in the summer for the *second and third crops*; for the cultivators of small tracts are not content with one crop, but keep their land in a constant state of cultivation. When the first crop is taken off, the land is irrigated, and another planted, and so on through the year. Five acres irrigated in this way become equal in product to 40 acres that are dependent on rain, upon which only one crop per annum can be raised, and sometimes if the rain fails, the crop fails also. On irrigated land, crops are a mathematical certainty. Such land as I am describing can easily be bought for ($30) thirty dollars per acre, cash, or one-fourth cash, with three equal, annual deferred payments, with ten per cent. interest, for the balance; but, if possible, it is better to pay cash. A man's home should be his own, and be all paid for; and if that home is able to support his family, then the father's mind is easy; their future is provided for, no matter what happens to him.

To provide water for this land by a flowing well, of three or four-inch bore, will cost from $150 to $250, depending upon the depth bored; but as one of these wells usually flows sufficient to water twenty to forty acres of land, one well would be sufficient for several small homes, provided they purchased near each other. But I will proceed on the presumption that each party has his own well. This would make the land and water cost $300 or $400; but it must be remembered that here expenses stop—*the water has been paid for; there are no future expenses, as with ditches*. If the land is outside of the flowing well belt, just too high for the water to flow, still the water rises near the surface, and but little expenditure of power is required to raise it. The depth required for a pumping well is less than for a flowing well, and, in consequence, it costs much less, say $100. The windmill and pump to supply five or ten acres with abundant water will cost from $100 to $150, so that the cost will be about the same in either case, and abundance of water will be assured. In fact, there is no limit to the water supply from these artesian wells, as is evidenced by the fact that a seven-inch pipe near Florence, at *Mr. Thompkins'* place, has furnished 25,000 gallons per hour for ten hours, pumping with a *Heald and Cisco pump*, and during the time the water in the pipe was only lowered three feet. Had the pipe been ten inches bore, it is probable that the water would not have been lowered three inches. Twenty-five thousand gallons will irrigate one acre of land, and as the expense of pumping was thirty cents per hour, this is cheaper than ditch water, with the advantage that you have it when you want it, and don't have to wait for your turn, and then have some one above you steal your water, as is generally the case. Men who are considered honest in the ordinary relations of life cannot resist the temptation to steal the water flowing by them to their neighbors' land. Somehow the ditch accidentally breaks just adjacent of the land that wants water, and before the break can be stopped his land is irrigated, and the neighbor has lost his water. These water quarrels are so constant, and so often lead to bloodshed and murder, that I consider artesian wells, either flowing or pumping, not only cheaper, but decidedly better. When a man owns both land and water, he is independent of Providence and every one else. If he fails to raise crops, it is his own fault. In this climate, families live comfortably in a common board shanty, which they build themselves, the boards and nails of which cost from $50 to $100. I will put the cost of house, stable, corral and chicken house at $150; one horse, harness, light wagon, plow, harrow, cultivator, etc., $200; seeds, $25; horse feed for three months, $25.

RECAPITULATION.

Five acres valley land at $30.00 per acre,	$150.00
Flowing or pumping well (cost for water),	250.00
Buildings, etc.	150.00
Three good dairy cows at $40.00 each,	120.00
Horse, harness, light wagon and farming tools,	200.00
One hundred hens at 50 cts. each,	50.00
Alfalfa and other seed,	25.00
Horse feed for three months,	25.00
Total capital required,	$970.00
ONE YEAR'S INCOME.	
1,645 pounds of butter at 20 cts.,	$329.00
1,095 dozen of eggs at 20 cts.,	219.00
	$548.00
Balance of cost after deducting income,	$422.00

It will be seen that, without counting vegetables and other food raised upon the land, that there would be an income of nearly 50 per cent. on the cost of the property, with all the property still on hand, and certainly worth first cost, but in reality worth more, on account of the improvements.

If four families settled together, the cost for water could be very much reduced, as one flowing well would supply water for all, and a pumping well, with an increase of the cost for pumping power of, say 50 per cent. would also furnish water for all. The land upon which pumping power would be required is a better quality for general crops and fruit than the lower land, where the water flows without pumping, and being warmer, drier, and free from the slight frosts that occasionally occur on the lower grounds, would be better adapted to the cultivation of small fruits, the sale of which would also become a source of income. Raising of vegetables for the San Francisco market in the winter, and for Arizona all of the year, is sure to become an important business, and small places, with garden culture, are better adapted to such products than larger tracts.

If Arizona continues to develop her rich mines and increase in population at the rate she is now doing, it will not be many years before the garden lands of these valleys will have to be cultivated in the most thorough manner, and cropped to their utmost capacity, to supply the population of that territory. A mining market is the best market in the world, and the small amount of produce that can be raised on the mid lands and in the torrid heats of that section will do but little towards furnishing what will be wanted. Our geographical position is such that we can supply what they need cheaper and better than anywhere else. Consequently, with our facilities for garden culture—rich, moist soil, and abundant supply of water, and moderately warm climate, tempered by cool, sea air and foggy nights—no other section can successfully compete with us. This is emphatically the best part of California for the poor man to seek a home in. For the man who has no capital besides his muscle, there is also no better place. Our work lasts all of the year. In the northern part of the State, about half of the year, during seed time and harvest, there is a large demand for labor, but during the other half of the year there is but little demand. Here the fruit plantations and vineyards require constant attention, and good, steady men who can be depended upon can get steady work and good wages. After two or three years' work, men who have saved their money are able to get a piece of land and start for themselves. Working men—I don't mean the pedantic tramps who adopt that name, but who want work, but really good, steady working men—will find this the best place they can come to. A large proportion of the white laborers who are here are so utterly unreliable, that employers are forced to employ Chinamen, but would not do so if they could avoid it. Working women are more in demand than men. There is no place in the world where good house servants can command higher wages, but they can't be had. Another trouble is, that they get married so soon, when they do come, that the demand is always far greater than the supply. Men who have a house full of smart, intelligent girls, that have been well brought up, and understand how to cook and do house work, had better start at once. The girls can get places at good wages immediately, and just as soon as they are known to be good cooks and housekeepers, all the bachelors and widowers in the neighborhood will be after them for wives. Consequently, we want a great many of these girl families to keep coming, to supply the demand, or we will have to go back to the incorrigible Chinaman again, and be no better off than we are now. So that I hope Mr. Carter will send along immigrants with large families, of the desirable kind—girls; and thus gladden the hearts of overworked wives and our solitary and disconsolate bachelors.

WM. R. OLDS.

ANAHEIM, July 18.

THE *Boston Journal of Chemistry* says: "No intelligent person can doubt that the free use of ripe fruit is conducive to health. On the other hand it is obvious that fruits as an exclusive article of diet do not meet all the wants of the system. The chemistry of the apple, the pear, the tomato, the grape, etc., is well understood, and it can be stated how much nutriment or nutritious food each is capable of affording; but this does not answer all the questions connected with the subject of the healthfulness of fruit. The acids of fruit are not properly nutritive substances, but they produce physiological effects of a cooling or corrective nature which are highly salutary. Fruits are capable of sustaining life for long periods, but the lack of the nitrogenous elements detracts from strength-giving power, and any one living exclusively upon them would not be able to labor effectively. If fruit is largely consumed in connection with a proper proportion of animal or nitrogenous foods, a much higher standard of health will be attained among all classes."

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1st. Its Construction is simple, and its movements are so complete that they do not get out of order.

2d. The Wheel and Vane being in straight line with its axis, and having no side vane, must necessarily always face the wind.

3d. Its Movement is steady and noiseless.

4th. It has but Three Joints to work the Mill, while others have as many as eighty or one hundred. In this particular we claim a great advantage over all other Mills.

5th. The Frame is very Strong, Simple and Cheap.

6th. It has Anti Friction Balls, upon which it revolves on its axis, needing no oil, and enables it to turn in the slightest breeze. Balls and bearings Oil Hardened.

7th. The weight is a complete weight of varying resistance, giving Mill a steady, regular motion.

8th. All our Mills are fully Warranted.

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60 Montgomery Street, San Francisco, Cal.

ORANGES.

WE give the following extract from the address of J. De Barth Shorb before the Citrus Fair, at Riverside, Cal.:

"The orange, as a local question, is of more importance to us than the grape; the former, while peculiarly our own in Southern California, the latter belongs to the State. While there are millions of acres well adapted to grape culture for at least wine and brandy making, from Shasta to San Diego, the area upon which the citrus cultivation can be safely followed is very limited indeed. I know the gentlemen in the northern counties will think my judgment in error, but the future will, I think, sustain this opinion, and they may thank me then for so candid an expression of it. In the Southern Atlantic States the isothermal lines have undergone many important changes. Orange orchards in Louisiana, once flourishing and productive, have ceased to bear entirely, on account of the increased cold. The trees still live, and that is all. In Florida, in and around Jacksonville, where once flourished the largest and best groves of oranges, no young trees can be grown, nor is it safe, or a certainty, north of a line seventy miles south of Jacksonville. Nor is it at all probable that great changes should be confined to the Atlantic States. Are not the same changes likely to follow here that have occurred in Louisiana and Florida? The late cold weather and the destruction of trees in the northern counties answer this question in the affirmative. Even in the counties of Los Angeles and San Bernardino, the area for the safe culture of the orange has been narrowed down by the late cold weather and the fear of its recurrence.

Many of those actually engaged in this orange culture have entertained fears that we would eventually see the business overdone; that we could not safely look beyond Nevada, California and Oregon to furnish our markets for the numbers that we would shortly produce. Although this thought has often occurred to me, I have never shared any of the fears entertained by others.

I early considered the keeping qualities of the oranges grown here, and having practically tested this question to my entire satisfaction, I rested easy. In the last of March, 1875, I shipped eight boxes of oranges from my orchard to the agents of Wells, Fargo & Co. in London. They were shipped to San Francisco by the steamer, thence by rail to New York, and by steamer to Liverpool, and by rail to London, where they arrived in perfect condition, not one having decayed in transit.

In order to open up new markets last year, I sent an agent to Salt Lake City towards the close of April, to whom I consigned

SEVEN CARLOADS OF ORANGES.

Although quite late in the season, a reclamation of only eight boxes was made against me as arriving in damaged condition, and this was due to the defective condition of the roof of the car. So much for the keeping qualities. Salt Lake last year consumed fifteen carloads, when formerly only a few boxes sent by friends ever reached that market. I believe this year, following my theory, our Mormon friends would consume thrice as many as last year—each year afterwards largely increasing the consumption. From Salt Lake the trade of Southern Utah, Idaho, and Montana could be worked up, until a large portion of our crop would find there a ready market. Then going eastward, Denver, Colorado, took a large number of boxes last year, and will take many more this year, if our crop can supply the demand.

In one year more, I believe, the Southern Pacific Railroad will have made an eastern connection, and the Atchinson, Topeka & Santa Fe, will also have reached our valleys. This last company are not building their road for glory, and we can confidently anticipate lively competition for the eastern-bound freights. These roads will open up so many new markets—establish communication with so many orange eaters that we will be ashamed that after all our talk of what we were doing we will scarcely be able to furnish one box for a thousand people. This is no idle talk—I honestly believe what I say.

THE CRY OF OVER-PRODUCTION

I have heard ever since my boyhood days. It is a remarkable fact, however, that this cry is generally indulged in by those who never had nor never will have a pound of anything to sell or ship. They are like unto the improvident farmer who, being disturbed by his energetic neighbors who were rising early to take care of their stock, turned over with the characteristic thought and expression, "Thank God, I have no pigs to feed!" It is astonishing how much sympathy this class of people have for their working neighbors; the energy of others seems to have a melancholic effect on them, and they are always ready with the original and generous sentiment, "I told you so."

The profits of orange culture have been so oftentimes stated, and such statements have called forth so many adverse criticisms from newspaper men, who are too frequently seized with a great desire to do some one some good, which is generally a blind leap in the dark, and which by accident and the grace of God, they sometimes accomplish, that I almost fear to state results I myself have obtained.

From a statement given me for publication by my commission men in San Francisco, Messrs. A. Lask & Co., of the amount of money they paid me in 1877 and 1878, which was $8,240, the profits that year were over $1,600 per acre, as the orchard was less than seven acres. I do not anticipate any such results in the future. Nor would I wish to encourage others with such hopes, but I do believe that, by growing good fruit, when the trees have acquired an age of from ten to fifteen years, for all good fruit sold a result of from $250 to $500 per acre, net, may be obtained.

Consumption increases always at a greater ratio than production, when transportation facilities are afforded the producer. Put this down as a rule to which there are few exceptions. When men cease to look to cities to make their living by their wits, and when all consumers in the country go to work to earn and produce something, then you may fear overproduction, and not until.

My conclusions from all the foregoing can be readily drawn. From the limited area on which the orange can be successfully grown and from the fact that the consumption will exceed the supply by the enlargement of our markets, my opinion is, that with us the orange interest will always pay more than the grape interest per acre. For the State, and nationally considered, the grape will become the great over-shadowing interest, dwarfing in its great results the orange, cereals, and bullion yield combined. I believe this will occur before the close of this century.

When all our warm valleys are planted in orange, lime and lemon, when all our sun-lit hills are covered with the graceful vine pouring forth rich treasures into the lap of the individual owner, county, State and nation, then will you have heard the last murmurings of discontent and communistic threats; all this will be hushed; the cry of want will give way to the notes of joy and thanksgiving arising from happy homes and contented firesides throughout the land; cities will be drained of their tramp element, the laws will be better observed, and society saved.

ORANGE CULTURE.

The labor of raising an orange orchard is not greater than is required to bring into bearing other kinds of fruits of a similar character.

The orange tree loves a warm, rich and moderately moist soil. It is a hardy tree and will grow and flourish under circumstances which would kill many a variety of fruit and forest tree, accounted the most hardy known. The tree is a great feeder and its demands in this direction must be supplied if fruit is expected year after year. The amount of fruit which a mature tree will yield, under favorable circumstances, is something wonderful, and any thinking man will concede the necessity of annual contributions to the richest soil to make amends for this continual drain.

A seedling tree will bear fruit in about seven years and be in full bearing about its tenth year. A grafted tree will produce fruit in abundance in five years, and cases have been noted where fruit was obtained the second year after grafting. The practice of raising seedling trees is now almost entirely abandoned and the stump of the bitter orange is grafted with a sweet scion. This produces a very hardy, early maturing and long lived tree, and one much less subject to disease. It will also thrive better than the seedling tree when indifferently cultivated or shamefully neglected.

The diseases to which orange trees are subject, are directly traceable, first, to imperfect drainage; second, to improper planting; third, to exhaustion of the soil. Where natural drainage is insufficient, which is not often the case, artificial means must be resorted to, as steam pumps or wind mills, but the desired result must be attained in some way or the land had better be devoted to other uses. Improper planting consist in burying the tree in a hole that collects all the surface water and scalds the roots. In sandy soils the danger of thus planting is not so great, but it is a safe plan to adopt, to have the union of root and trunk slightly above the level of the surrounding ground.

In olden times orange trees were planted twelve, eighteen and twenty feet apart. While the trees were young and the soil unsapped, these did not seem unreasonable distances. But when the trees arrived at maturity its branches interlaced with its neighbor, the sun could not penetrate the dense shade thus formed, the limbs decayed and the only fruit to be found was on the extreme top. Had thirty or even forty feet separated the trees the result would have been vastly different. The lateral branches would have extended to a considerable distance, fruit would have formed from base to summit, and every branch would have been robust with life.—*Mandarin Merchant.*

THINNING FRUIT.—A gentleman said to us, in answer to the inquiry, "Why don't you thin your peaches, and prop them up? Your trees are all breaking down:" "It is cheaper and pays better to let them break down with a big crop every other year." We differ from our friend, and have yet to find another of the same opinion as he. We believe it is better to have a fair crop of nice, good fruit each year than an abundance of second-rate fruit on alternate seasons. The thoughtful builder and skillful engineer put the philosophy of mechanics in a nutshell when they say: "What is gained in velocity is lost in load, and what is gained in load is lost in velocity—the power remaining the same." There is a range for the velocity and a corresponding one for the load, which is most economical, and outside of which the work done will, in the end, cost more than it comes to. It is the wise and successful man who runs his machine within the limits of these extremes. Every fruit tree in the land is, to the owner of it, a fruit-producing machine. It has its best load which it will bear with the corresponding best velocity. Under the forced conditions which our fruit trees grow, it is necessary the hand which has changed their nature should guide them in their artificial work. In our estimation, one of the most important practices in horticulture is the judicious thinning of fruit. Fruit growers must learn that there is a limit to the proper bearing of a tree, beyond which it must suffer, and all its members with it. When will the lesson of fruit thinning be earned?

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An evidence of the superiority of the Plummer is seen in the fact that it received the highest award and medal at the Paris Exposition, 1878, Centennial medal, Philadelphia, 1876, three gold medals at the State Agricultural Society, Oregon, one each year since patented and silver medal by dried prunes. And silver medal awarded by the Southern California Horticultural Society, 1879. Also medals and diplomas of highest award at numerous other places exhibited.

Over 1000 of these Driers already in operation on the Pacific slope since patented in Oregon three years ago.

For price, descriptive catalogue of Family and Factory Drier, address,

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PERMANENT RESOURCES OF CALIFORNIA.

THE man who owns a good farm in this State, is out of debt, and has his farm well stocked, is better off—is worth more, acre for acre, than any man who owns a like number of acres in any one of the Western States. There may be a few exceptions, but not enough to weaken this general statement. Why is he better off? Because he can produce a greater value of agricultural products, with less labor than he could east of the Rocky Mountains. Not every farm pays in California. There are some poor farms and a great deal of poor farming. These are the acknowledged drawbacks. Now and then we hear from some arm-chair theorist that wheat farming does not pay. In a few instances it does not. But as a general rule it has paid well here. The value of the wheat crop in this State for the present year will probably exceed $50,000,000. Ten or twelve millions of this amount are clear profit. If the crop did not pay in the long run, farmers would abandon its cultivation. They can find out what pays and what does not a great deal quicker than the mere theorist can. The cost of getting a bushel of grain to market comes out of the farmer. The actual price is, in part, determined by the grain dealers who are buying on foreign account. These prices are regulated by the quotations, for instance, in Liverpool. The farmer gets what his wheat is worth at tide water, or less the cost of getting it there. Now it is easier to get wheat to tide water in California than it is from Illinois, Kansas, or Minnesota.

The agriculture of California is a permanent resource. The mines may give out. The great Comstock Lode goes for months without paying a dividend. The whole amount paid there this year is not one per cent on the capital invested. But farming, when intelligently followed, pays fair dividends one year with another; and at the same time the agricultural resources increase. A good farmer has a better farm at the close of each successive year. If he has not, he does not deserve success. The market for all cereals, taking one year with another, is better here than in any of the Western States. The surplus grain of these States finds its way to New York or to New Orleans. The distances vary from 1,500 to 2,000 miles. There is, of course, the local market where the farmer can sell his grain, but the prices at such places are governed by the value of the product at tide water. Besides the enormous crop of cereals in California, the fruit crops are very large. Take the vineyard interests alone. This is of more importance to-day than all the viticultural interests of all the States east of the Rocky Mountains. And yet this interest is in its infancy.

What can be done in the way of viticulture in California cannot be done in the other States. Experiments have pretty well settled that question. Scientific grape-culture has been going on in Ohio for more than forty years. Yet the wine production of that State, which is of some local importance, cuts no figure in the wine marts of the country. Grape-growing for wine purposes has been conducted for about as long a time in Missouri. But the results are as yet insignificant. Very good table grapes are produced in most of the States. Yet the sorts imported from Malaga and from California cannot be grown in most of the States. Every year car-loads of certain tropical table grapes go from this State to places beyond the Rocky Mountains. That business is also in its infancy. There can never be any great amount of competition. Malaga grapes are brought into New York and sold later in the season at retail prices, averaging from 20 cents to 25 cents a pound, or about double the price for which California grapes can be laid down in the same markets. There is at present no known limit to that business. It is prosecuted now on a moderate scale and with great caution. Yet the business is already important enough to attract the attention of Eastern fruit buyers to this market.

It is not likely that the viticultural interests of this State will culminate during the next half century. What they may be at the expiration of that period it is difficult to predict. There will be no such thing as exhausting the resources in that direction. Neither will wheat production culminate as long as there is a good market and there is an increasing breadth of new land to be brought under cultivation. It is easy enough to overstock the local markets with cereals, grapes, wine and a great variety of fruits. But so long as the outside markets are fairly good, the main question is one of adaptation of products to such markets. Production will go on and the aggregate values will be increased. The men who have taken 40 to 50 bushels of wheat from tule lands this season find some compensation for years of disappointment. Yet nothing like one-third of the tule lands of the State have ever been ready to produce cereals or have been fairly reclaimed. The men who made 100,000 boxes of raisins last year did well enough with their product, yet all the prominent raisin-producers in California to-day can be counted on one's fingers, excluding, of course, the amateur producers and the mere beginners. How long will it take to overstock the markets of the United States which take, say, 4,000,000 boxes? what a small proportion of acres are to-day producing grapes suitable for raisins!

The truth was never more apparent than now that agriculture is and will be a permanent source of prosperity, and that in a sense which not many were willing to accept a few years ago. The large fleet of wheat ships which will this year go to the commercial capital of Oregon could not be drawn there by any other interest. At this date it is doubtful if ships enough are on the way to San Francisco and Portland to carry away the wheat cargoes which will be offering for export. When, therefore, one and another are taking gloomy views about the decay of the mining interests, it may be well to look at the relative value of these interests, so far as this State is concerned. It is not at all likely that mining interests have actually gone over the grade. Only the centers of these interests may be shifted somewhat and be more remote from this city. So long as the value of the industrial productions of California are on the increase, it may be assumed that there has been no failure of resources affording the permanent prosperity of the State. The giving out of a mine, here and there, is as much an incident of that business and as confidently to be expected by close observers, as that there will be seasons of extraordinary agricultural production in California.—*San Francisco Bulletin*

Apiary Department.

EDITED BY N. LEVERING.

DISTRICT CONVENTION OF BEE-KEEPERS.

At the suggestion of many apiarists, who think that a convention of those engaged in honey-producing should be held this fall, and believing that such a general meeting would materially advance the interests of this branch of industry in Southern California, I name the 20th and 21st days of October, 1880, at Los Angeles, California, as the time and place for holding such convention, that being during the session of the Horticultural and Agricultural Fairs. A cordial invitation is extended to all apiarists in the State, and to all ladies and gentlemen who feel an interest in the science of apiculture.

C. J. Fox,
Pres. District Bee-Keepers's Association.
N. Levering,
Sec'y Los Angeles Bee-Keepers' Association.

In marketing honey, two points should never be forgotten—that a good article in an attractive shape will always command the highest price, the best reputation and a steady demand. We see the facts illustrated every day. The confectioner assorts his candies and fruits, in fact arranges everything in his store, in the most tempting style to captivate human tastes and appetites. The druggist adorns his packages of powder with the lithographs of beautiful women; his toilet soaps are put up in daintily perfumed boxes; and thus in every branch of human industry the great aim of the knowing ones is to make things look attractive.—*Indiana Farmer.*

Newport is the shipping point for a large section of country. There is the great "corn belt," and the crop promises this year is excellent. No irrigation required, and the yield will be 75 to 100 bushels per acre.

R. F. Porter, of San Fernando, claims that 25 pounds or less of Odessa is enough to sow to the acre, where it requires 45 pounds of other kinds.

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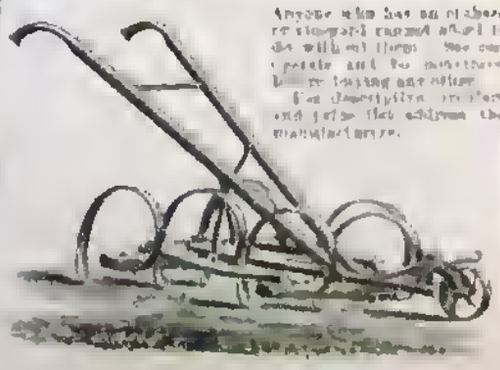

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choice, lb	20	@	30	Veal Pots, doz	54	@	2 00
Cheese	15	@	20	Can'd Oysters,			
Eastern	20	@	25	doz	3 75	@	3 50
Lard, Cal	8	@	10	Syrup, St'ld'n	90	@	1 00
Eastern	15	@	20	Dr'd Apples, lb		@	18
Flour, ex. fam				Dr'd Prunes	12½	@	
bbl	6 50	@	7 50	Eggs, Cal.		@	30
Cal. Mills,				Ins'ct Pow	10	@	20
Rose	3 20	@		Hills, Lemon	12	@	30
Pioneer Pearl	60	@	2 00	Honey	15	@	20
Superior, do		@	3 70	Ro.	10	@	12
Graham 50 lb				Extracted	7	@	13½
sack		@	1 87	Lemon, Cal	8	@	10
Buckwheat	10	@	15	Mang, do	2	@	12½
Oatmeal Cal, lb				Eastern	15	@	17
In sacks		@	55	Potatoes, Cal	90	@	
Eastern do		@	71	Onions, Cal		@	4 00
Corn Meal, lb	10	@	1½	Beans	3 50	@	2 50
Sugar, granl'd	12	@		Butter,	1 40	@	1 50
Light Brown	9	@	10	Ham	5 00	@	6 00
Coffee, Green	20	@	35	Fresh Beef	4½	@	6½
Tea, Fine 50 lb	50	@	1 00	Corned Beef	00	@	8½
Finest Japan	50	@	60	Mutton	10	@	12
Candies, Assorte	15	@	20	Porterhouse	12½	@	15
Soap, Cal	8	@	10	Chickens	3½	@	15

EMEVATORS VS. GRAIN SACKS.

The grain crop of this State is now estimated as follows: Total area seeded to grain, 3,780,864 acres, which might be roughly classified as 2,850,000 in wheat, 600,000 in barley, 150,000 each in oats and corn. Taking the lowest estimate, California would have 57,000,000 bushels of wheat, 24,000,000 barley, 6,000,000 oats, and 7,500,000 corn, in all, 91,000,000 bushels; or take the average of wheat, barley, etc., all round; as being only 20 bushels to the acre, 75,817,820 bushels. Equivalent in sacks, to 53,000,000. This low estimate calls for the enormous expense of $3,300,000 a year, for bags alone, in which to handle this crop. This waste of money is a monstrous drain upon the industries of the people, and ought to be stopped. An elevator should be built at Wilmington, another in Los Angeles, and another in San Fernando. All grain carried on the cars should be removed in bulk. By that method the cost of handling is reduced to a trifle and the work is done in a much shorter time than by the old method. Our grain farmers are kept poor by this outrageous tax for foreign bags. All of this can be avoided by shipping in bulk, and handling by elevators. In a few months our bright, excellent brewing barley will be carried by rail through Arizona, New Mexico, and Texas to Galveston; thence by steamer to Philadelphia, New York and Liverpool. It will also go by rail to Kansas City, St. Louis and Chicago. All this transportation should be made in bulk. Our wheat will go to Europe via Galveston. It is now time to be moving in the matter, and and to make increased facilities for handling our grain economically. Next year the grain yield of Los Angeles may be double what it is this year, and if we continue the foolish custom of bagging, the profit of grain raising will be very small. The merchants and farmers should take prompt action and abandon this ruinous policy of bagging grain. The Asiatic nations are making more money in making bags for our grain, than our farmers are making in raising it. The few grain farmers in the San Fernando Valley alone, will have to send $40,000 of their hard-earned cash to Asia, to pay for bags to move the present crop of wheat and barley. All this could have been saved to them by shipping their grain in bulk. The question comes home to the pockets and homes of our people. Half the mortgages on the grain farmers of Los Angeles are made in consequence of the tax for Asiatic bags, for grain. It is high time this slavery to Asia was abolished. The people can form a joint stock company and erect an elevator at small expense, and forever free themselves of this heavy burden. The grain of Los Angeles can just as well be carried in bulk as the hundreds of millions of bushels are carried in the eastern portion of the continent. At the new wharf of the Southern Pacific Railroad, at Wilmington, and at the wharf of the Pacific Coast Steamship Company, elevators should be erected for hauling grain. A meeting should be held, and a company formed to carry out this greatly needed work. Who will take the initiative in the matter?—*Los Angeles Commercial.*

No other city of the population of Los Angeles can compare with her in her hotel accommodations. The COSMOPOLITAN HOTEL, Hummel & Denker, proprietors, presided over by Herr A. H. Denker, would do credit to any city of much larger proportions. The traveler is struck by the generally fine appearance of the house as he rides from the depot in their great Concord coach and is set down at the office door. And as a friend remarked to us on his first visit to Los Angeles. "This is a country of surprises, and among them the greatest to me was your Cosmopolitan Hotel, first class in exterior, interior, rooms, bed and board. My stay is much longer than I intended, on account of the good accommodations and kind treatment received in the hotel."

MR. KENEALY, of the dry goods firm of Dillon and Kenealy, of this city, is now in Europe, buying goods for this popular establishment. The stock he will purchase will be bought from the manufacturers—the linens of every description in Belfast; laces, curtains, etc., in Nottingham; silks in Lyons; and novelties, notions, etc., in Paris and London. Mr. Kenealy will be absent several months, returning in time to release the goods from the Custom House, New York; the importation to be made direct to their house in Los Angeles. The goods will arrive in October, in time for the Horticultural Exposition, at which Messrs Dillon and Kenealy will make a grand exhibit from these rare goods.

WANTED—NATIVE PLANTS,
Bulbs, Roots and Seeds.

Collectors and Cultivators will please correspond with the undersigned, stating names, quantities and prices in large quantities

Especially Brodiaeas Calochortus Cyclobothras Fritillarias Lilies, Amaryllidas, Bulbilis, Iris, Leucojum Vivum, and all kinds of Bulbs.

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"NOTHING SUCCEEDS LIKE SUCCESS."—The business man or firm who succeeds is deserving of great credit, and is worthy of the honors and profits he may have made in his honorable strife, in this battle of life. As a model and successful man, Mr. B. F. Coulter, the dry goods merchant in Baker Block, deserves and receives the reward he has so earnestly won. Mr. Coulter first opened his doors as a dry goods merchant in this city at the corner of Main and Temple Streets. Although his experience and judgment in this line of business was almost as old as he himself, by courteous treatment, honorable dealing, and a liberal use of printers' ink—for Mr. Coulter is a liberal advertiser—he soon found that his quarters were too small for his fast increasing business. He moved to Baker Block, and opened one of the largest and finest dry goods establishments in Southern California; and with a continued prosperity in trade, until again cramped for room, he doubles the size of his already large store, by renting the room adjoining and formerly occupied by the prince of grocery men, Geo. D. Rowan. Archways connect the two rooms. Mr. Coulter now has ample room for the proper display of his stock, and for the accommodation of his trade, giving him the largest floor, shelving and counter space of any like establishment in Southern California, and we doubt if any dry goods house on this coast has any more ground floor. We point with pride to this establishment, as showing the growth and stability of our city, and hope many of our business men will be stimulated by a like success to enlarge their business.

WILSON'S $50 SQUIRREL POISON.—The following receipt, said to be a "sure shot," is handed us by Mr. W. G. Kerckhoff. We ask all who try it to report its progress. One ounce strychnine, half drachm cyanide potassium, pulverize the two, and mix thoroughly together in three quarters of a pound of extracted honey, three yolks of eggs to seven pounds of wheat. Stir well, drop six to ten grains of wheat near the holes, and the job is soon done.

PRESERVING FRUITS.—A foreign chemist has published a new method of preserving fruit, which deserves a trial on a small scale, as it is simple, yet deemed to be perfect in the preservation of the peculiar and original flavor: "Wash the fruit clean after gathering, and place in vessels a fluid composed of 200 to 300 grains of sugar to one litre of pure water, and three grains of salicylic acid. The jars, with their contents, are then closely covered with common writing paper, kept in a moderate temperature." In this way, the professor has found by experience that plums, cherries, apricots, peaches, grapes, etc., can be preserved in good, sound condition for a whole year, retaining their flavor.

Subscribe for the *Semi-Tropic*, $1.50 per annum.

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Twenty-eight miles of irrigating canals are now completed, and there is abundant water in the driest seasons to irrigate all the lands offered by the Company. About 1,000 inhabitants are now in the Colony—enterprising and intelligent people. We have good schools, four church organizations, daily mail, telegraph line, newspaper, etc. Lands are offered at moderate prices and on liberal terms, and no lands are sold but to actual settlers. I invite all seeking homes in this portion of the State to call and see us before purchasing elsewhere. Every facility will be afforded for the examining of the lands offered.

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This Association is now offering for sale on easy terms some of the finest lands in California. They are situated about 1000 feet above the sea, in the rich and beautiful valley of San Gabriel, protected on the north by the Sierra Madre Mountains, while on the west a range of hills and mountains tempers the chill of the sea breeze as it passes over them for forty miles before reaching this locality. This combination of advantages makes it a delightful residence for invalids, while the lands produce all the grains and fruits of the temperate zone, and many of the products of the tropics. The land is supplied from large reservoirs fed by mountain springs, and carried in pipes along all the avenues of the tract which is divided into tenement lots, with water rights for every lot. This property is but seven miles from Los Angeles, and near the line of the Southern Pacific Railroad. For prices and full details, address

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SEPTEMBER

SEMI-TROPIC CALIFORNIA

Devoted to Agriculture, Horticulture, and the Development of Southern California.

LOS ANGELES, CAL.

CARTER & RICE,

PUBLISHERS

VOL. III. 1880. No. 9.

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Semi-Tropic California

AND

SOUTHERN CALIFORNIA HORTICULTURIST.

VOL. III. LOS ANGELES, CAL., SEPTEMBER, 1880. No. 9.

COLONIES IN SOUTHERN CALIFORNIA.

EDITORS SEMI-TROPIC CALIFORNIA: People who are thinking of exchanging the severe winters and sultry summers of the Eastern States for the mild winters and temperate summers of Southern California, naturally hesitate when the thought occurs to them that they are not only about to make an entire change of climate, but also of the associations with which they have grown up; they are about to go and mingle with strangers—new people, different in ideas and habits, from those with whom they had grown up, and with whom they sympathized. These strangers might not be pleasant people to live among; and then the idea would naturally occur, why not organize a colony of people from the same section of country, who had been brought up with similar habits, modes of thought, religious and political sympathies—in short, transport home, with all its surroundings, to Southern California, and thus make no change except that of climate? I am decidedly of opinion that colonies of persons from the same section or country is the proper way for immigrants to come to Southern California. By combining and purchasing a large tract of land they are able to get their land cheaper, and controlling the tract purchased, they can keep out objectionable people, and regulate all matters relating to the settlement, according to their own wishes. Again, it not infrequently happens that people who design making this change are not ready to come at once, and may not be for two, three, or four years. By joining a company of this kind they could purchase their land, have it planted in vines, and different varieties of fruit trees, and cultivated and cared for by contract, during the three years required to make it productive. So that when they were ready to come and take possession they would have a profitable and productive property, ready to be occupied, and avoid the tedious waiting required to create a plantation for themselves.

The colonists of Anaheim (which is probably the most successful colony ever planted in California) pursued this plan; for two years all the work was done by contract. Each share represented twenty acres of land, and the cost of the improvements was paid in assessments by each stockholder until the third year, when the settlement actually commenced; then all the shareholders having collected the different vineyard lots, they were divided among the shareholders, and each managed his own plantation himself after that time. All of these colonists who have avoided speculation, and confined themselves to their legitimate business, are rich, and now that the vineyard interest has become so prosperous, are likely to grow richer, as the prices of wine advance, and the consumption increases.

I cite the example of Anaheim as an example of what has been done in the past by men who had to contend with difficulties that would have discouraged most men, but which were overcome by pluck and perseverence, and resulted in a grand success. These difficulties now do not exist. Everything is made plain and easy, and the results are certain; given the land in a proper location (free from frost), a supply of water for irrigation, and money to pay for the work, and any kind of a fruit plantation can be created in a term of three years—your orange and lemon trees budded on four or five-year-old stock, will bear on the third year; vines the third year from the cutting; apricots and nectarines, which are profitably cultivated in, and are practically a monopoly of Middle and Southern California, also bear on the third year, and such is the demand for these fruits for canning and drying, that five-year-old plantations have netted from four hundred to five hundred dollars per acre, at the low price of two and one half cents per pound this year. All kinds of northern fruits bear on the third year from the bud. So that the intending immigrant can safely make his calculation that in three years his place will be ready for occupation, and be in condition to make returns for the money he has spent upon it. For those who are not yet ready to come, and who have the means to contract, this is better than a tedious waiting on the spot for the plantations to grow; besides, the place being managed by an expert, is more likely to be a success than it would in the inexperienced hands of a new beginner. Creating a place requires more skill than the after management of a place already created.

There are places in this valley suited for colonies, convenient to railroads and steamer landings; within two hours' drive of the Pacific Ocean; with rich soil, in locations, free from frost; with plenty of water and perfect climates, waiting for the advent of purchasers who will improve and make its fertility productive. Our natural advantages are great, but we want people from the North and East to make them available. Wherever immigrants from that part of the country settle, something is done; they are full of the spirit of improvement; they work and duction of new and improved fruits that take the place of former favorites, plantations require renewing to keep pace with the improvements of the day, and the persevere until they have created a home such as they have been accustomed to in the land they have left, but they find, owing to our rapid growths, that in five or six years they can create a place that would have required twenty or twenty-five years in the Atlantic States. Our climate not only lengthens our lives, but it also enables us to do twice or three times as much in a given time. When a man plants an orchard in the Eastern country, practically, he does it for his children; here, in three years, trees commence bearing, and in ten years they are in full maturity; the planter may be advanced in years, but he reaps the reward of his enterprise himself. Of course, owing to this rapid maturity, the platations will not last so long as they do there, but quick returns are more profitable, and plantations can easily be renewed if found to be failing.

Besides, owing to the constant intro-early maturity of our trees makes this easy; if any variety of fruit ceases to be in demand, another is quickly substituted for it.

In addition to the demand for fresh fruit, the drying and canning establishments, which are constantly extending their operations, have created such a demand that but little fruit now goes to waste; it is all utilized, and fruit-growing has become a very profitable and prosperous business, and one to which Eastern colonists may safely devote themselves.

WM. R. OLDEN.

ALMOST every farmer prefers putting his hand to a bright plow says the *World*, which turns the furrows with comparative ease to both team and driver, than one weather-beaten and dulled with the previous season's dirt, and yet many dollars dwindle imperceptibly but surely away each year, and farmers annually grumble, all because of the careless handling of farm machinery. With one accord, reapers and mowers, seed-drills, plows and harrows, are suffered to remain where last employed, to bear the action of pelting storms and drying winds. The repairs required the following season will cost more than the building of a shed or tool-house, in the arrangement of a place for them in out-houses already erected.

SEMI-TROPIC

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N. C. CARTER, GEO. RICE, } PUBLISHERS AND PROPRIETORS.

CIRCULATION - - - - 5000.

FAIR NUMBER.—The next number (October) of the SEMI-TROPIC CALIFORNIA will be issued about the fifteenth instead of the first. It will be devoted largely to the interest of fair-goers, and have a daily free circulation at the Horticultural Pavilion during the fair. We guarantee that the edition shall be 5,000 copies, all of which will be distributed at our fairs.

If any of our subscribers who are entitled to our *premium map*, have not received it, we will mail it on notification by postal card. We will continue to give a map of California and Nevada (size 20x24), geographically correct, and folded in a neat cover, to every subscriber who sends us $1.50 for one year's subscription.

N. C. CARTER'S California excursion party will leave Boston September 14. Fare, $70. Quite a number of emigrants will come out with this party, and a great many more will soon follow. Excursionists generally prefer to wait until after the November election, when another party will come through. Still a third party is talked of to come direct to Southern California as soon as the southern route is open, which promises to be the largest ever brought to the State. We are evidently on the eve of a "boom."

PROF. J. H. COMSTOCK, Entomologist, and his accomplished assistant, Mrs. Comstock, who are sent out by the Agricultural Department at Washington to investigate the injuries to the citrus fruits from scale insects, made this office a pleasant visit.

JAMES D. SCHUYLER, Assistant State Engineer, ably assisted by a corps of surveyors, is doing a good work for Southern California, in the prosecution of the State Hydrographic Survey. It is believed that sufficient water can be developed to irrigate nearly all the available fertile lands of Southern California.

THE TWO FAIRS.

Much progress has been made since our last issue by the horticultural and agricultural societies looking towards a grand success of the two fairs this fall. The premium list of the Horticultural Society is large and ample, with a guaranty fund to promptly pay all premiums at the close of the fair. The Sixth District Agricultural Society, as organized under the State law, have raised a large fund and purchased the agricultural park, and financially are in a better condition than any other agricultural society in the State.

In addition to the usual exhibits of the Horticultural Society, the agricultural products for which premiums are offered by the Sixth District Agricultural Society, will also be exhibited in the horticultural pavilion this year. In the language of the circus man, we will have "two shows under one tent," which will certainly be a drawing card. The price of admission will not be advanced from that of last year. The fair is already, thus early, an assured success, and with the co-operation of our farmers will be a grand exhibition and redound to the welfare of the horticultural and agricultural interests of Southern California.

No other country in the world is capable of such an endless variety of productions from the soil as Southern California, and that great variety is grown to a higher degree of perfection than in any other country. We are essentially and substantially more interested in the farm, orchard, and vineyard than in any or all other pursuits. The success of our vineyards, orchards, and farms, in a great measure, depends upon the improvements and advances made as learned from each other's experiments and often dearly-bought experience. No other means does so much to bring out and illustrate all the successes as our fairs.

AT the recent Triennial Conclave of Knights Templar, at Chicago, the Knights of California distinguished themselves by the lavish hospitality they displayed, no less than by their magnificent uniforms. They not only secured the next Conclave for California, but aroused all over the East a desire among the people to see the wonderful country that can support such prodigal abundance. The interest thus awakened will result in an increased tide of immigration to our State, and will be a far-reaching source of advancement. Honor to the doughty Sir Knights.

STATE FAIR.—The twenty-seventh annual fair of the California State Agricultural Society commences on the twentieth, and ends on the twenty-fifth of September, at Sacramento City. Twenty thousand dollars appropriated for premiums. Every department is well represented, and everything done on a most liberal scale to make a grand success. All articles and animals exhibited at the fair are carried free to and from the fair by the Central Pacific Railroad. Low-rate excursion tickets will be issued.

THE SUGAR BEET FACTORY of Messrs. Nadeau & Gennert is nearing completion, and in the mean time they are busy drying the crop, which is pronounced a good one. These gentlemen will make a large and interesting exhibition of the sugar beet industry at the horticultural fair in October.

THE BEE-KEEPERS ASSOCIATIONS of the various counties of Southern California are actively at work getting ready to make the largest honey exhibit at the Horticultural Exposition this fall ever made in the world. They also hold a district convention during fair week, and we expect good results from their meeting in the interest of the apiary.

PEAR BLIGHT STOPPED.—We have tried it repeatedly and never knew it to fail. That is, cutting off diseased part and slitting the bark on one side of the limb and body, from the affected part down. In fact, if the diseased part is not cut off, and the limb and body slit, it will stop the further destruction of the tree, or at least has for us every time.

WASGERMAN'S CITY BAND has been secured to furnish music during the horticultural exposition. The full band, with a new and artistic *repertoire*, will add a great deal to the attractiveness of the programme during each afternoon and evening. The musical programme will be complete and well rendered this year, better than at any previous fair.

LARGE APRICOTS.—O. W. Childs this month exhibits a basket of apricots, the five "on top" weighing twenty ounces—a quarter of a pound apiece. R. B. Bryant, on Pico Street, shows a fine lot also, four weighing fifteen ounces, the largest over a quarter of a pound. We have bought nearly as large ones from the fruit stands.

A few years ago an earnest controversy was carried on as to whether butter should be washed or unwashed, those advocating the latter claiming that by pressing or working out the buttermilk without the aid of water it served to retain more of the aroma and delicious flavor naturally belonging to butter, and which should not be removed by allowing the butter to come in contact with water. Won't some of our butter-makers experiment and report progress?

THE ALDEN FRUIT-DRYING ESTABLISHMENT of this city has been run into full capacity day and night since its opening, July 23d, and still the demand is for more dryers to utilize the abundance of excellent fruit grown in this county. This one establishment, under the direction and ownership of Mr. Geo. B. Davis, has dried over sixty tons of peaches, the price paid averaging three quarters of a cent per pound. The apple season is just coming in, and the establishment will have all the work it can do for some time to come. The fruit dried by this process is always in good demand at the very best prices.

We will answer all communications addressed to us in reference to California through this column. We will answer regular subscribers by personal letter, when stamp is inclosed for postage.

The Horticultural Board of Directors remain the same as last year, except Capt. C. E. Thom succeeds L. M. Hull, removed to San Bernardino County. The members of the board are giving their time and attention free to carrying on the good work of the society. They have settled up all the old debts, and placed the society in good trim for a "boom" at the coming fair. The expensive management has been cut off, and instead of paying out big salaries the year round, no salaries are now paid, the board doing the work without cost to the society, thereby saving hundreds of dollars. The various positions of trust and responsibility during the fair are to be filled by members of the society as far as possible, without pay, and volunteers are asked for.

A LETTER FROM PASADENA.

Editor Semi-Tropic: Permit me to call attention to a few facts concerning the effect of the season, or something else, upon the growth and apparent vigor of the citrus family of trees the present season in this vicinity.

Visiting my neighbor, Mr. John Low, yesterday, he expressed a desire to have me walk through his fine orange grove, which I was pleased to do. Not a weed was to be seen, and no garden spot would need to be in better condition. "Well, what do you think of my trees?" "Could not well look better," I replied. "How many times have you irrigated them this season?" I asked. "Not once, and but once last season. My neighbors," he said, "are inquiring every day what I do to my trees to make them grow so; and I tell them that I am allowing the sun to warm up the soil, instead of pouring on the cold water every few days, thereby so reducing the temperature of the surface roots temporarily, and the deep roots permanently the entire season through, that they can't grow naturally, at least, if at all." Now, this orchard is nearly one mile from my orchard, to the east, and probably in a somewhat different soil; hence, it is hardly fair to suppose that my soil alone is peculiarly adapted to perpetually maintain a marked vigor and annual growth of wood without artificial irrigation. It is now in its fourth year, entirely dependent upon the clouds and capillary attraction for its supply of water. I am also told by many of my neighbors that my trees are making an exceptionally fine growth.

GRAPE IN PERSIA.

They are doing exceedingly well here. Less than five per cent. have so far failed to start promptly and grow vigorously out of ten thousand put out in March last. The process was with an iron bar to make the hole with, and set from fifteen to twenty inches deep; then the soil, free from lumps and stones, was carefully washed into the hole by a small jet of water through a hose attached to a barrel, or sprinkling pot, until full. This last process well done, two days after and the cutting will be found as firm as a post; and if said cutting was good at the first, it will not fail to come in due time, and also make a strong vine.

Don't use suckers for cuttings, which are usually long-jointed, straight, and fine-looking. Take the more scrubby-looking, short between the buds, and especially fruit-producing cuttings, if you can get them. The few that have so far failed to start this season with me, are of the objectionable class above mentioned.

It seems to me that it would be more acceptable to the public, and also more beneficial to horticultural interests, for contributors to the press to confine themselves to facts instead of hypotheses or theories. There is a science of horticulture, and everything should be reduced to facts in this as in that of any other science. In this way we could soon establish a common foundation for all in each of the various branches recognized as belonging to the general department.

Have but a moment's time to scratch down the above, which the public can see verified, and much more of interest, by a pleasure drive out to our prosperous settlements. O. H. Conran.

August 25, 1880.

EXCHANGES.

Seed-Time and Harvest is the very appropriate title of an illustrated quarterly horticultural magazine, edited and published by Isaac F. Tillinghast, La Plume, Pa. Any single article from Mr. Tillinghast's pen is worth many times more than the yearly subscription price, which is only twenty-five cents.

The *New York Weekly Herald* is one of the largest, newsiest, and best family newspapers published in the world, and can be had for one year, post-paid, for one dollar, making it the cheapest as well as the largest. Subscriptions received at this office.

The *Cotton Semi-Tropic* comes to us bright and fresh, with both sides printed at home. We admire the pluck of our friend Scipio, and hope he may succeed in building up Cotton to the standard of his *Semi-Tropic*, or what we think is a better wish, that he would come up to the metropolis, paper and all. We want you.

Arizona at the Horticultural Fair.—Messrs. Peal & Kimball are sparing no pains or expense to perfect their mineral cabinet before sending it to the Horticultural Exposition, Los Angeles, as a representation of the mineral wealth of southern Arizona. The collection already embraces choice specimens from fifty valuable mines, a list of which will be appended. * * * But a short time intervenes between the present and the date of shipment, and as it is manifestly to the interest of every one having valuable property to have it represented, we trust that additions to the cabinet may be forwarded without delay.—*Tombstone Epitaph.*

Fair Complimentaries.—We acknowledge the receipt of complimentary tickets to the State Fair, Sacramento, Sept. 20-25; Mechanics', San Francisco, Aug. 11-Sept. 11; 6th District Agricultural, Los Angeles, Oct. 18-23. Also from the Fair Association of Kansas city, Sedalia, St. Louis, St. Joe, Atchison, Lawrence, Topeka, and Neosho Falls.

To Visit California.—English papers mention a report that Mr. John Clay, Jr., Kenchester, one of the assistant members of the Royal Commission on Agriculture, has received instructions to proceed to California to report on the agricultural resources of this country in view of the approaching harvest.

Never in the history of California has the soil returned more bountiful crops to the industrious husbandman. To the man who tills the soil, and plants and harvests the grain, who plants the orange, lemon, fig, and the vine, and by his industry brings them to perfection, does this country owe her prosperity. No country in the world produces a greater variety of productions than does our sun-kissed land, Southern California.

PUBLIC SCHOOLS.

SPECIAL PREMIUMS BY FARNELL & CARTER.

Open for competition to the pupils of the public schools of Southern California.

Best original essay	$20
Best recitation	10
Best song — Solo — Instrumental accompaniment if desired	10
Best drawn map of California	10

Rules governing the school exercises:

Pupils in actual attendance in the public schools may compete for these prizes, and must notify the secretary on or before the tenth of October for which prize they will compete. The public exercises and distribution of prizes will take place Tuesday, October 19th, from the stage in the Pavilion. The programme will be arranged with care, so as to make these school exercises one of the special events of the fair.

Essays must contain not less than five hundred nor more than eight hundred words, and be accompanied by a certificate of the teacher in whose school the writer belongs, that from his knowledge of the writer he believes the essay to be original. Decision to be based on originality of thought, and elegance of expression.

Recitation and declamation to be not less than two hundred nor more than four hundred words for pupils under twelve years; and not less than four hundred nor more than nine hundred for pupils over twelve years.

Song: no restrictions as to length.

Award to be based on melody, articulation, and expression. (Instruments for accompaniment provided by the society.)

Maps to be of uniform size, on cardboard 10x12, with one inch blank border, to be drawn on school, accompanied by teacher's certificate stating that no book or map was consulted.

Age of pupils will be considered.

CITRUS FRUITS, SAN DIEGO COUNTY.

BY GEORGE C. SWAN.

There is a fascination in growing citrus fruits, to one reared amid the rigors of a northern clime, which can rarely be incited by any other enterprise.

The beauty of the orange tree, with its ever green leaves, its delicate perfume of white flowers, and its golden fruit, the latter so pleasing to the eye, agreeable to the taste, invigorating to the system, and filling the pocket with dollars and cents.

Citrus culture has been the theme of so many rose-colored statements, that persons without much thought and less experience, have rushed into it, expecting their poorly selected trees to bud and blossom with gold, without the labor and vicissitude attendant upon any successful enterprise. Such persons have failed; others, willing to combat with the drawbacks and the diseases contingent thereto, willing to unite good culture with good management, have succeeded beyond their highest expectations.

The orange tree lives to a good old age. The Grand Bourbon, of Versailles, recently died at over four hundred and fifty years. An orchard once established, lasts through life, and can be handed down to children's children. It delights in a warm, sunny clime, free from hot and cold blasts, a deep and friable soil, free from heavy fogs—the latter said to be one of the causes of the black dust fungus.

Previous to 1867, there were but a few scattered orange trees in the county, poorly cared for, producing inferior fruit, the impression prevailing that nothing but sumac, greasewood, and cactus could be successfully grown. Shortly afterwards, some trees were imported, followed by a gentleman who selected the best seeds he could get, and planted them, with nerve enough to make citrus fruits a specialty, and today is rewarded with nearly 2000 bearing trees.

The assessor's return for 1879 is, orange trees bearing, 2,517; lemon, 870; lime, 482. Estimates for this year are double the number. The total rainfall averaging only 10 inches, the supply of water was the absorbing question; this is now settled beyond controversy; an abundance of good water is found at from twenty to one hundred feet from the surface, with the San Diego and Sweetwater rivers to fall back upon, whose dry sandy surfaces cover pure running water. The uncultivated soil becomes parched and hard, covering the surface with a bronze-like appearance, seemingly impossible for any vegetation to exist.

In 1877, the writer had nearly 200 orange trees budded upon four-year-old stock, which were transplanted into sandy loam, over sixty feet to water, irrigated and cultivated the first year, cultivated thoroughly after the rains last year and this year. They grew well last year, and are growing now (August 1st) without irrigation last season or this year; rainfall last year 9 inches, and 14 this. The cultivation must be done well, and at the proper time.

The cold of last season has demonstrated that the whole tillable soil of California will not produce citrus fruits in the perfection some would lead us to believe. Even here, the most southern county of the state, the frost struck some localities, and the trees suffered; the majority, however, escaped, and are now bearing fruit. Hixson, Justi & Co., citrus fruit dealers, San Francisco, write to the *Riverside Press* "that they had traveled through the fruit-growing sections of twelve counties of central California; they discover that the extent of country, where the orange is a success, is not so large as was supposed, and that suitable for lemon and lime very limited."

Seedling orange trees produce fruit in six years from seed, bearing at twelve years from 200 to 2000. Budded trees bear sooner but not as many. Seedling lemons come in sooner than oranges, bearing two crops per year, the two yielding about the same as the orange, selling here from $2 to $5 per hundred; supply now equal to the demand; so few of the seedlings prove good (about one in a thousand), budding is now relied upon. Limes bear in five years, are more easily affected by frost than the lemon, and the lemon stands less than the orange; the lime is very prolific, bears two crops per year. We have picked from a twelve-year-old tree 4,000 per year for past three years, selling for $5 per thousand; one hundred trees to the acre, would be for one acre $2,000. We merely mention this, not to induce the whole of California to go into the growing of limes, but to show what has been accomplished. We should prefer, however, raising them at one dollar per thousand, than to grow wheat, corn, or barley.

San Diego has certainly made a good record for superior quality of fruit, during the short time engaged in its culture. The first premium was awarded to her at the Southern California Fair, Los Angeles, 1877.

San Diego oranges were judged equal to those of San Bernardino and Los Angeles, at the first Riverside Fair. In the lemon test of twenty-six plates, the San Diego lemon was pronounced the best.

First premium was awarded to San Diego for both lemons and oranges at the State Fair, Sacramento, 1879.

At Riverside, 1880, first premium was awarded to her for the best budded orange.

In May, 1880, of sixteen plates of lemons, the San Diego seedling was one of three which the State Horticultural Society recommended for culture. The chemical test by L. M. Holt of Riverside (who is well posted in citrus fruits), placed it at the head of the list.

We think our best oranges equal to the Louisiana or Florida. Prof. Hilgard's test of the San Diego orange makes a better showing than that of Prof. Nichols of the Florida. It keeps well. We have exhibited on several occasions the old and the new crop, picked at the same time. At the Los Angeles exposition, 1879, special mention was made by Gen. J. H. Shields, one of Los Angeles' foremost horticulturists. He says, "the oranges were very fine; the crop of 1878–79 (the old crop) perfectly sound;" thus enabling the producer to hold for better prices, if the market is overstocked.

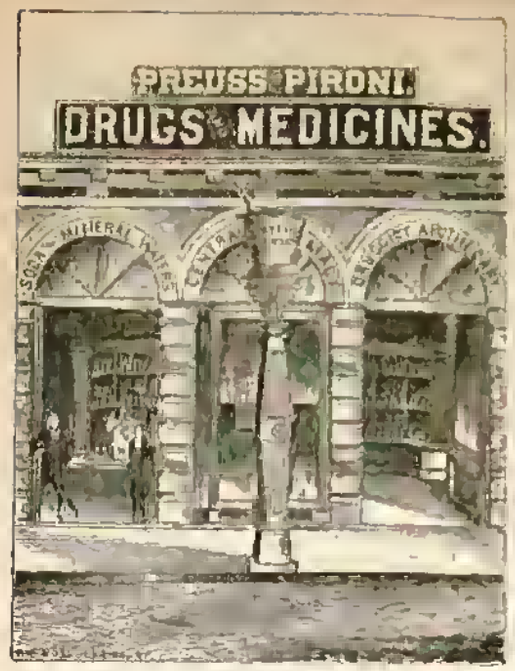
In order to meet expenses, waiting for trees to bear, crops and northern fruit trees between the citrus trees are grown. We prefer to grow them separate, and can barely mention that peaches bear the second season, and sometimes the first; potatoes mature in February; strawberries planted in summer bear in winter, and generally the whole season. The cold of the past season checked them so that only a few were produced in January and February. One of my neighbors has picked, since April 1st, from one half acre, over 2000 pounds, selling in this market for an average of 10 cents; they require too much irrigation for the good of the citrus tree.

The many new uses constantly arising, create an increasing demand for citrus fruits. Use begets use; and where one lemon was used a few years ago, fifteen to twenty are now disposed of. In warm countries, a lemon per day is conducive to the health of the majority; a few can not use them. We know of one person who uses five or six daily, when indisposed, with benefit. We have sold to one person, for the past six months, for his own use, five hundred lemons; he dispensing with the physician whom he had been obliged to employ. So that the oversupply feared by some, will be met by the larger demand.

We judge San Diego pre-eminently adapted to citrus fruits, being in latitude 32°, the zone of calmness; the strong breezes and heavy fogs prevalent at San Francisco, are gradually toned down to the required temperature. The best locations are known, the best varieties can be selected, and good culture, which in the past was an unknown experiment, is now at one's command, and all this tends to crown the zealous efforts of the future citrus grower with success.

OLD FRUIT CANS.—If we should bring together and present in one article, all the various devices for utilizing old fruit cans, it would be a curious array. Every now and then a new method is added to make those cast-off affairs of service. The latest comes from Baltimore. A friend there draws upon them for a supply of tin. By heating sufficiently to melt the solder, the tops and bottoms come off, the joint at the side opens, and the pieces that formed the body of the can are flattened out, and kept in stock. Is a patch needed under a shingle, does a knot hole in a old ditto need to be stopped? does the horse gnaw the wood-work of the stable? a piece of tin is the remedy.

THE *Santa Clara Journal*, in speaking of the Southern California Horticultural Society, says: The managers propose to make it a complete exposition of the horticultural and agricultural products of the southern part of the State, and the material being ample, there is no doubt that a notable display will be made.



21 Spring St., Los Angeles.

The above cut represents the front of the building occupied by the enterprising firm of Preuss & Pironi, Manufacturing Pharmacists, Chemists, and Druggists. This house was established in 1870 by Messrs. Preuss & Schumacher, and continued so until 1879, when Mr. C. B. Pironi, an accomplished chemist, bought out Mr. Schumacher's interest. In addition to carrying a large and complete line of fresh drugs, they deal extensively in all kinds of toilet articles, and everything usually found in a first-class drug store.

These gentlemen also manufacture a great many non-secret preparations; among them we mention: Wild Cherry Expectorant, Sarsaparilla, with Iodide of Potassa, Vegetable Liver Regulator, Compound Fluid Extract of Buchu, and many other standard preparations. They also manufacture cosmetics and toilet articles, etc., their Velvetum supplanting all other cosmetics used for a complexion powder; their cuticle-balm is not excelled by Burnett's celebrated cocoaine.

They make a fine quality of Florida Water, and many other articles, saving to their customers the large expense incurred in importing articles of inferior quality. Their store-rooms are models of neatness, conveniently located, and open day and night for the convenience of the public. We will have more to say of this firm at another time, in connection with a new and more correct engraving of their store-room.

San Bernardino Mines.—Miners and prospectors should not forget that Hon. John Lowslie is collecting specimens of every kind of mineral found in the county. They will be placed on exhibition at the Horticultural Fair in Los Angeles this fall. No better show could be had for them, and wise miners will be in haste to send in their specimens with such information as will show what they are.—*Colton Semi-Tropic.*

A space has been set apart for a "mineral exhibit," and will be an important part of the exposition.

Agriculture.

Of all the States in the Union, there is not one that can be compared with California in the facilities of cultivating the greatest variety of trees, shrubs, and plants. Its soil and climate are as favorable to the hardy fir that grows on Norway's rugged shores, as it is to the palm tree from the borders of that tropical land where summer is perpetual. Nothing attracts more attention from the travelers who visit our coast than the variety of our plants and the beauty and luxuriance of their growth. To those who arrive in the winter from the ice-bound Eastern States, the sudden change from the barren, inhospitable mountain ranges to our beautiful valleys is as winsome, bright, and welcome as the balmy air that reigns around the Lago Maggiore at the outlet of the Simplon pass in the Alps. But the first enthusiasm of the visitor to California is gradually diminished by the sameness of the landscapes that meet his eye, through the absence of any combined method of arboriculture that would so add to the natural attraction of the land. Whether it be from apathy or habitual neglect, our farmers and holders of large estates appear to be little inclined to add to the adornment of their grounds by the propagation of trees and plants, and when even some slight attempt is made to add to the decoration of their homesteads by these means, they content themselves with the cultivation of such common, but still useful trees of rapid growth as the poplar and eucalyptus, while the far-reaching plains and slopes are diversified almost solely by clumps of California oak. Of late years a change, initiated, as in England, on the estates of rich and artistic holders, has gradually been wrought by the importation of valuable specimens of horticultural science, and a project is now under way that is not only unique in its character and boundless in its future attractive beauties, but that will also be a marvel of princely enterprise and one of the wonders of our State.—*S. F. Chronicle.*

BRIGHT PROSPECTS.

California promises to make a good march forward this year, not only in material productions, which will be in the aggregate greater than ever produced before, but also in the development of her resources and the establishment of a goodly number of desirable incomers in the delightful task of home-making in California. So far as our information goes, there is a gratifying spirit of content, energy, and enterprise now ruling in all parts of our commonwealth. Our young and vigorous State is already fast brushing off the dust of fallacies which social and political theorists threw upon her countenance, and is again coming into the eye of the world as a vision of all that is stirring in enterprise and desirable in natural resources. The result of this true view of California is seen in the hosts of responsible people from abroad who are making or contemplating investment in California soil, and carefully scrutinizing the growth, preparation, and marketing of different products to decide what line of production they had better adopt. The restored confidence in California is also seen in the other host of men who have somewhat invested in city property or business enterprises, who are thinking of transferring their capital and energies to the field and sharing in the advance which seems to be assured to several of our specialties of agricultural production.

Fair fame abroad and confidence at home will be greatly brightened and strengthened by this year's experience in California, and the present generation should never allow the State and its future to be again darkened by the cloud of demagogism. Nor does there seem reason to fear a return to the darkness. The evil we have passed through was brought about, in great part, by the discontent of thousands who were led to our State by glowing descriptions, the deduction from which was, that California could give men something which they did not earn. We have atoned for this folly of those who claim to be our friends, and we are now starting upon a course of moderate prosperity, which is based directly upon a man's will and power to deserve it. This is the surer foundation, and California is the best place in the world to build upon it.—*Rural Press.*

ROOT PRUNING.

The experiments were made on the apple and pear. A vigorous apple tree, eight or ten years old, which had scarcely made any fruit buds, has done best when about half the roots were cut in one season, and half three years later, by going half way around on opposite sides in one year, and finishing at the next pruning—working two feet underneath to sever downward roots. It has always answered well, also, to cut on such trees all the larger and longer roots about two and a half feet from the stem, leaving the smaller and weaker ones longer, and going half way around, as already stated. The operation was repeated three or four years later by extending the cut circle a foot or two farther away from the tree. By this operation, unproductive fruit trees became completely studded with fruit spurs, and afterwards bore profusely. This shortening of the roots has been continued in these experiments for twenty years with much success, the circle of roots trimming greatly circumscribed. The best time for the work has been found to be in the latter part of August and beginning of September, when growth has nearly ceased, and while the leaves are yet on the trees, causing greater increase of bloom buds the following year than when performed after the leaves have fallen.—*London Gardener.*

The following are the stage rates from Benson, Arizona, to the places named: To end of track A. T. & S. F. road, $73.00; to Mesilla, $46.50; to Silver City, $28.00, which, considering the distance traveled and the nature of the country, are very reasonable charges.

Viticulture.

CALIFORNIA'S VINTAGE.

California grape-growers and wine-makers have a flattering prospect ahead in relation to this year's vintage. It promises to be the largest California has ever known, and is variously estimated at from eleven to fourteen million gallons. The frost of last winter was damaging to some descriptions of fruits, but they occurred too early to affect the vineyards. The only effect the cold weather had upon the vines was to delay the budding, and consequently make the season for ripening late. In this respect the season of all fruits is regarded by those engaged in the business to be at least one month later than it is in ordinary years.

Promising, however, as this year's vintage prospects are, they give but a vague idea of what California's capabilities mean a wine-producing country. Compared with the product of European wine districts the vintage of California does not cut a very conspicuous figure. Following is a table showing the average vintage of European countries:

France, gallons	1,485,000,000
Italy	817,000,000
Spain	510,000,000
Portugal	135,000,000
Austria (including Hungary)	324,000,000
Germany	175,050,000
Switzerland	24,300,000
Russia and Eastern Turkey	54,000,000
Greece and Cyprus	32,400,000
Roumania	1,800,000

The ravages of vine diseases and such pests as phylloxera have reduced the vintage of France the current year one-third, as it is not expected to exceed 945,000,000 gallons. From the foregoing it will be seen that the small republic of Switzerland produces an average of about double that of California's vintage, while the little kingdom of Greece and the adjacent island of Cyprus jointly produce three times as much wine as California. It is the opinion of those best acquainted with the capabilities of the State for viniculture that if one half of the land within it adapted to the culture of the grape were planted in vines the California vintage would equal that of France, Germany, and Italy combined. At present the total area of land in California under vines is only about 60,000 acres. Before the appearance of the phylloxera in the French vineyards they covered an area of from five to six million acres. It is estimated that the pest has destroyed one and a half million acres of vines in that country, and its ravages have not yet been stopped.

Grape-growers feel confident this year of realizing amply on their crops. The growing popularity of California wines abroad strengthens their faith. Large wine manufacturers and exporters, who have to buy grapes, complain, however, that growers are holding their grapes at too high a figure to insure the manufacturer and exporter a reasonable chance of floating the product on the foreign market at a fair profit. They hold that the success of California wine abroad has been largely due to the ability of manufacturers in late years to place it in market at a low figure. It is just as true, however, that California wines are now wanted abroad as much for the special qualities which they possess as for any other consideration. Germany is already a small importer of California wines, and uses them to strengthen its own product, which has lost some of its essential qualities through the impoverishment of the soil of its vineyards.

Then there is good reason to suspect that much of the California wine that finds its way to France returns here in a doctored condition, bearing a new brand and under French colors. No doubt, when the time comes to gather the grape crop, grape-growers and wine manufacturers will find a happy mean in the price; and so far as the foreign demand for California wines is concerned, there is no reason to fear that will diminish, whatever disagreement may exist between grower and manufacturer. Wine is better than bank notes, for it increases in value with increasing age.

A Washington dispatch of yesterday says: "The Consul of the United States at Cologne, commenting on the prospects of the vintage of the Rhine and its tributaries the present season, says it is thought by experienced observers that the vintage will not exceed one half of the average yield." This news will lead to still further strengthen the wine market, and improve the prospects of the California wine-growers.—*Bulletin.*

HOMEMADE WINE.

The following receipt has been handed us, together with a bottle of wine one year old, made under its directions. We recommend it:

Let the grapes gathered be rather ripe, with all decayed and imperfect ones removed. Mash, strain and measure. To each gallon of the juice add one pound of white sugar. Let stand for two or three days; skim, strain, and measure as before, and to each gallon add one pound of sugar. Let stand again for two or three days, and again skim, strain, measure, and add the pound of sugar to each gallon. Cork and put away. Do not add a drop of water to the juice if you want good rich wine.

The Raisin Crop.—From the resumé of V. Romany & Sons, Denia, Spain, on the condition of the raisin crop of that country, we learn that alarming damage was caused by a hail-storm, on the twenty-ninth ult., in the kingdom of Valencia and farther in the interior. The damage is calculated to amount to some 1500 tons of raisins. "It's an ill wind," etc. California succeeds wonderfully. In addition to creating a better demand for our raisins, we can invite our foreign friends to come and grow raisins where no hail-storms, or any other kind of storms, ever come.

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FROM FRANCE.

THE PHYLLOXERA.

A correspondent of the *American Farmer*, writing from Paris, says the government has published some sad statistics of the ravages of the phylloxera. At the commencement of 1877, there were 28 departments invaded by the vine-ling; 39 at the end of 1878, and 43 at the close of 1879. Before the invasion of the disease France had 5,371,282 acres under vines; of this total, 1,172,936 acres have been totally destroyed, or nearly one-fifth of the vineyards of France. There are about 800,000 acres attacked by the disease. Naturally those regions have most suffered where no efforts were made to check the ravages. Autumnal submersion is the remedy most in favor; then replanting with American stocks; next sulphuret of carbon, and then sulpho-carbonates as preventives. Each remedy demands liberal manuring of the vine in spring. The first is now all but accepted as a perfect cure.

THE ACIDITY OF WINES.

It is well known that wine does not inherit the same degree of acidity as the must from which it is derived; but at the second racking it possesses a degree of acidity which remains next to invariable. Some German chemists have been studying this subject; they have experimented with several chemical agents in the solubility of cream of tartar in water. The more a wine is alcoholic the less it is rich in tartaric acid and potash. Medium and common wines contain from 2 to 3 grammes of tartar per quart. Now the direct addition of tartaric acid to wine feebly diminishes the solubility of tartar, while acetic acid augments it; but malic acid is the best solvent. The acidity of wine is not due to tartaric acid, but to malic acid, bartrate of potash, tannic, succinic and acetic acids. In its normal state wine only contains from ½ to 1 per 1,000 of acetic acid. When double that quantity is present, the wine acquires its peculiar sharp taste. Free tartaric acid is only found in unripe grapes, and the absence of this acid indicates complete maturity. The quantity of tartaric acid per quart of wine varies from 1 to 9 grammes; but the finest wines do not contain more than 2 or 3. The quantity of tannin diminishes with age; while the glycerine, on the contrary, augments.

The well-known Stump's Vineyard, at Orange, seems to furnish the first ripe Muscat grapes this year, as it also did last year. The soil at Orange seems to possess the power of ripening fruits about two weeks earlier than other portions of the county as far as is now known. But some other section may yet come in the front and dispute the palm with the Orange fruit growers.—*Los Angeles Commercial.*

To Protect Grape Cuttings from Rabbits.—Mr. Bant has given us the following experiment of Mr. Lewis Brosseau, of Duncan: He plants a hill of corn between each cutting—one way, so as not to interfere with cultivation—letting the corn stand as long as there is a rustle among the leaves, the noise of the leaves scaring the rabbits away.

TEN THOUSAND A YEAR.

HOW TO GET IT.

UNDER the above caption, Chas. A. Wetmore, viticultural commissioner, writes the *San Francisco Herald* as follows: One of the most promising fields for investment and industry is that of viticulture. If our people will take the trouble to investigate the subject, they will find that a well-selected piece of land, cultivated skillfully in vines for winemaking, will yield an average of one hundred dollars per acre, when full bearing, after paying expenses. This is equal to an income of ten thousand dollars from one hundred acres. This does not include the profits of winemaking, but simply the profits of selling grapes to the winemakers. With proper skill, and the facilities for winemaking and distilling, the profit per acre will average from one hundred and fifty to two hundred dollars per acre.

This occupation is most fascinating to all who engage in it. It possesses features which lift it above the ordinary dull monotony of agriculture. It is not as difficult to engage in now as it was when our present vine-growers began their work. The experience of those who have succeeded is worth millions of dollars to those who now begin to follow in their footsteps. Intelligent men need make no mistakes now, and may correct the blunders which inexperienced men in the past, who had no guides to follow, suffered from. Yet with all the blunders incident upon inexperience and experimenting, the vine-growers to-day demonstrate more prosperity in their business than any other class among us. This is sufficient to encourage even timid men to do as they have done.

The cost of bringing a vineyard to full bearing depends partly on the price of land. Suitable lands of prime quality may be purchased at prices varying from $40 to $150 per acre. The cost of planting and cultivating until vines pay expenses, which is generally the third year, will average about $50 per acre. Cheaper work is often done, but results show that careful cultivation insures the best returns. One hundred acres of bearing vines may then fairly represent an actual cash outlay of from $6,000 to $20,000. Lands vary in prices, when of equal producing quality, according to location, fancy of holders, surrounding civilization, etc. Let the rich man gratify himself with a $20,000 investment, and be satisfied with an income of $10,000 per annum. Let the poorer man look for fortune in cheaper lands.

It is practical for an association to plant one thousand acres in vines, and by utilizing all the profits of winemaking and distilling, to anticipate an income of from $150,000 to $200,000. The capital invested need not be more than from $75,000 to $150,000—price of land varying.

It is practical for an association to take a tract of land I know; ten thousand acres of good vine land at $40 per acre, plant it two thousand acres each year until all planted, erect cellars and distilleries, and after eight years be in possession of products, viz.: six million gallons of wine, great quantities of brandy, and an income $1,500,000 per annum. The capital necessary to do this will be about $450,000. I shall not enter into details. All this can be shown to those who desire to investigate the subject.

Vineyards in good localities, well cultivated, are now yielding from the sale of grapes $100 per acre profit. This you can all prove for yourselves; $100 per acre is ten per cent. on $1,000. The cost of planting and cultivating, including price of land, in such places, would be from $400 to $600 per acre.

I submit these propositions for the consideration of those who desire to make profitable investments, and especially to those who desire to build up profitable homes, upon which they may in a few years retire from less fascinating pursuits. Think of a 100 acre vineyard, all paid for, to retire upon in five years, yielding an annual income of $10,000 from the sale of grapes to winemakers."

THE FAIR.

The Southern California Horticultural Society will make the largest and finest display of horticultural and agricultural products this fall ever made by them. In addition to the premiums offered by the society, the Sixth District Agricultural Association also offer a liberal premium list for agricultural products, the exhibit of which is to be made, together with that of the horticultural society, in the horticultural pavilion, October 18 to 23, inclusive. The joint exhibition in one pavilion will assure the largest and best exposition of horticultural and agricultural products ever made on the Pacific coast. The premiums offered for horticultural and agricultural products to be exhibited at the horticultural pavilion this fall exceed in number and value those offered by any other society or fair on this coast. The Southern California Horticultural Society is the only association on the Pacific coast which makes horticultural and agricultural products the basis for an exposition.

The people of Southern California are more especially interested in, and more nearly identified with the important work of advancing and improving the horticultural and agricultural industries of our country than in any other enterprise. Nothing will or can do more to advance these interests than a general and friendly competition, and every citizen of Southern California should make the very best exhibit of their products, as well as attend the exposition for the general knowledge to be obtained, and a friendly meeting of citizens from all sections of the country. A number of distinguished citizens from abroad have signified their intention of being present at our fair. We bespeak a full exhibition and a large attendance, worthy of Southern California.

A wash for the *Farmer and Fruit Grower* says a wash composed of eight ounces of salt to one gallon of soap, and a handful of sulphur put on trees, will prevent rabbits barking trees.

VINE ITEMS.

THE San Bernardino *Times* says that within a few weeks $130,000 have been expended by Eastern home-seekers for land in San Bernardino Valley.

RAISINS.—The *Bulletin* says that when California can raise 1,000,000 boxes of raisins annually, about one fourth of the demand in this country will be supplied. Probably this State will produce 200,000 this year. The raisin business will henceforth be one of the great industries of Southern California.

CANNING GRAPES.—Procure rich, ripe grapes, pulp them, and boil the pulps till the seeds are separated. Boil the skins in a separate kettle until tender, with sufficient water to prevent burning. Run the pulp through a colander, add to it the skins, and boil up, with five pounds of sugar to eleven of fruit. Can as hot as possible.

BUDDING THE GRAPE.—First cut off a piece of wood from the shoot or cutting, three or four inches long, with a plump bud well ripened at the middle. Then cut away, lengthways, half the wood, taking care not to destroy the pith at the woody base of the bud. Cut the ends with a sharp knife, perfectly smooth and straight, and then place the prepared bud on the stem of the old vine to be worked over, and mark out the exact length and breadth of the piece holding the bud; cut out a part of the stem sufficient to receive the bud with close fitting—one side at least, and both ends should make a perfect fit. Press the bud in, tie firmly, and cover with clay or grafting wax. Several buds of different varieties may be inserted in one vine. When the bud has grown to form one leaf, the branch or vine beyond the bud should be cut away.—*Farmer and Grower.*

NEW IDEA ON THE PHYLLOXERA.—Summers Brumfield, whose ranch and vineyard are located two miles below Healdsburg, advances the idea that vines are never attacked by phylloxera unless first diseased; and as proof cites the fact that the insect has never yet been found in a young vineyard. The vineyards attacked are old ones and as Prof. Hilgard says, first show the ravages of insects in spots. Mr. Brumfield says that the spots first attacked are where the soil has been exhausted of those properties necessary to keep the vine healthy. He is an advocate of deep, rich sandy, land for dual to vineyards. His oldest vineyard, planted on ordinary up land, twenty years old, began falling off in the yield at ten years of age, now bearing only one-third what it did at that time, and is slowly dying. His remedy for the phylloxera would be to remove the vineyard and give the land a chance to rest and recover its lost properties, on the principle of rotation of crops.—*Russian River Flag*, May 20, 1880.

THE *Herald* says: "We have no hesitation in saying that Los Angeles, as the case stands, the real center of the most extensive system of railways on the continent,

ECONOMY IN IRRIGATION.

Until within a few years, economy in using water was not much thought of in Southern California. If the quantity thought necessary to flood the land was secured, the orchardist was happy, and he *drenched* his land and sat in the shade. The inevitable result is plainly to be seen in our old orchards—in the unhealthy, dying, and dead trees—trees which have been *drowned*. More recently less water has been used, and applied only near the tree, in basins, with better results. Still later another step has been taken, which promises such economy in the use of water (and labor too), that many of our thinking, intelligent orchardists estimate the area of land which may be *sub-irrigated* without increasing our water supply at *ten times* that now irrigated.

Examine the ground in any orchard in the summer, and you will always find the driest soil close to and under the trees. Clearly, then, this is the proper place to apply water in irrigating; for often the soil *between the rows* is moist enough during the entire dry season, although the trees may suffer. To water this moist soil would only be a waste of water and an injury to the land.

The old rule was to flood the entire surface of the land an inch (or more) deep at each irrigation—say six or more times a year. To do this requires at least 27,000 gallons of water at each irrigation. W. R. Oldon says, in the Semi-Tropic for July, that 25,000 gallons will irrigate an acre. This gives, at one hundred trees per acre (about the average), 250 gallons per tree at each irrigation.

The sub-irrigationists hold that it is wrong to apply water on the surface of the ground in summer, where all the climatic conditions rebel against it; not only because of the great loss of water by evaporation, but also of the injury to both soil and tree by the unavoidable succession of extremes—*drouth* before irrigation, and *excessive* moisture after.

If this theory is correct, then the practice of surface irrigation is not economical. The loss of water from our ditches and fields by direct contact of the sun's rays is enormous.

Let us see if here is not the place to apply our economy—carry water to the fields and trees in *pipes* and apply it near the tree, where it is needed *always below the surface*.

It has been proven that 2,000 gallons per acre, or 20 gallons per tree, applied twice a month give quite as good results by *sub*-irrigation, as the 250 gallons per tree once a month by *surface* irrigation. We have in one case 250 gallons per tree per month, and in the other 40 gallons per tree per month, thus increasing our area of land which may be irrigated with the present supply of water, *six and one fourth times*.

Says the *Mandarin Merchant*, Florida: "The orange tree loves a warm, rich, and moderately moist soil." As the truth of this is admitted by all orchardists, the point to settle so far as irrigation is concerned, is, how to keep the soil *moderately* moist. If the water is applied under the surface, frequently and in small quantities, a condition of uniform or moderate moisture must necessarily be maintained.

No one questions the great saving in water by some system of under-surface application, and a consequent saving in the cost of irrigation, providing it does not cost too much to apply it.

In the June Semi-Tropic the cost of surface irrigation is put at $16.10 per acre, for the season, including summer cultivation, or $11.20 without cultivation.

Let us see what it costs to sub-irrigate an acre of land planted with 100 trees, having a line of pipe laid along each row, as the most convenient way—cement-tile pipe being durable, and the cheapest—to cost, for, say 2,000 feet of pipe with outlets, all laid complete, $50.

Interest on first cost one year at 10 per cent	$5.00
24,000 gallons water (at *high* price)	1.00
Labor (simply turning on and off water)	1.00
Total for the season	$7.00

The ground having received the same thorough cultivation required in winter as for surface irrigation, being left at the end of the rainy season loose, thoroughly pulverized and clear of weeds, needs no further attention than the cutting with a hoe of the few dry-weather weeds which may start, the loose top soil acting as a mulch to prevent the evaporation of moisture.

San Diego, Cal.

The Plymouth Rocks are the coming favorites, being good layers, hardy, and large for market.

HORTON HOUSE, SAN DIEGO.

On the first day of January, 1870, the foundation was laid for the Horton House. Owing to the great energy of its builder, in nine months from that date, completely furnished, it was thrown open to the public. Two years before, its site was covered with the low, laurel-like shrub peculiar to this part of the State, and was the home of the quail and the rabbit. Few, indeed, would have had the hardihood, in the then sparsely-settled new town, to think of constructing such a caravansary. Mr. Horton, however, looking rather to the coming thousands than the present hundreds, completed the present structure at large expense.

The building and grounds comprise an entire block of land in one of the most beautiful portions of the town. It has a frontage of two hundred feet looking out upon a square facing the south. The width is sufficient to admit of an ample hall, running through the main building, east and west, with rooms on each side. Those facing the south have commanding views of the bay, ocean, and islands, forming a rare combination of ocean and land scenery. Those facing north look out upon the town and rising hills and mountains beyond.

The hotel is of brick, two stories and a half high, presenting to view a rather massive appearance in the lower portion that is relieved by the Gothic windows and gables of the attic story. Built in the form of a "T," the wing penetrates the middle of the block towards the rear. The sides and back part of the grounds are inclosed with a row of pepper trees, making a secluded inclosure where guests may enjoy croquet. In one nook is a charming orangery.

To return to the house, the main entrance is made into a lobby, on the right of which is the office. On the left, a reading room of commodious size and well lighted appearance invites to leisurely perusals of the daily papers or social converse. Just beyond, the well-appointed billiard room offers a charming resort to those who delight to handle the cue and drive the ivory balls. From the lobby you ascend to the second floor by a wide staircase branching midway to the right and left for either hallway. You reach the parlor, and are delighted with its fine proportions, its lofty ceiling, and magnificent view from its windows. In fact, whichever way we turn, the feeling is that of gratification. The wide and ample hallways, the flow of sunshine in every guest's rooms, easily regulated by the readily adjusted inside blinds whenever the heat becomes too ardent, the light and airy dining-hall, of which we have no space to speak, all serve to produce the feeling of comfort so grateful to the traveler, and so often wanting in many hotels.

Such a hotel, in a climate that permits the valetudinarian to bask in the warm sunshine of winter, brings healing to weak lungs, and grants a respite from pain, and lengthened days to the confirmed invalid, is simply a luxury.

We are glad to say, in conclusion, that in the hands of the present proprietor, Mr. C. P. Gerichten, its long established reputation is well maintained.

HORTON HOUSE, SAN DIEGO, CAL.

THE SOUTHERN PACIFIC.

PROGRESS OF THE NEW TRANSCONTINENTAL RAILWAY.

From the S. F. *Bulletin* we learn that on the twenty-third ult. the builders of the Southern Pacific Railroad had successfully surmounted all the obstacles met in the Dragoon mountains, and on the twenty-fourth commenced a lively race for El Paso, over 200 miles from the end of the track, which it is intended to reach in 100 working days or possibly a few days over. On the twenty-fourth ult. there were 12,200 feet of steel rails laid; on the twenty-fifth, 11,[illegible], on the twenty-sixth, 12,800—over two miles, and the greatest distance ever laid in one day for the Southern Pacific; and on the twenty-seventh, 12,000 feet. At this rate the company will reach El Paso with its road by Christmas. The road is now completed and in running order 111½ miles from Tucson, or [illegible] miles from Benson. It is now 21[illegible] miles from the boundary line of New Mexico, which will be reached in 12 days. Since January 26, 1880, the company has built and put in complete and first-class running order 175½ miles of steel rails. Following is an interesting table of distances on the line of the road:

From San Francisco to Yuma, miles	[illegible]
From San Francisco to Tucson	[illegible]
From San Francisco to El Paso, [illegible]	[illegible]
From San Francisco to El Paso, via Mexico	[illegible]
From Yuma to [illegible]	[illegible]
From Yuma to El Paso, [illegible]	[illegible]
From Yuma to El Paso, via Mexico	[illegible]
From Tucson	[illegible]
From Tucson to El Paso, [illegible]	[illegible]
From Tucson to El Paso, via Mexico	[illegible]

THE COLONY SYSTEM.

Successful Experiments in Southern California.

BY J. C. PEABODY.

The writer of this article, during the past few years, has had an opportunity to visit and thoroughly examine nearly every settlement, conducted on the colony plan, located on the Pacific Coast. As the question as to the best manner of settling our vacant lands is one of overwhelming importance, a brief account of the origin and progress of several of the colony enterprises in Southern California can not fail to be interesting.

WHY COLONIES SUCCEED.

There are various reasons why the colony plan is the best method of securing a home in California. Our irrigating system is a peculiar one, and requires harmony of action in the use of water, otherwise the results are disastrous to the community. In a colony, such rules and regulations can be adopted as will secure to each individual the use of the irrigating facilities at the proper time and without inconvenience to his neighbors. Then the class of people who join colonies, at least such is the case in California, is generally a desirable one. They want churches, schools, literary and social societies, good roads, and all other improvements. They can combine together and inaugurate certain home industries, such as fruit-drying and canning establishments, woolen mills, soap, starch, boot, shoe, hat, and other manufactories, and they find that one industry helps to sustain another. Other advantages are that they can usually obtain lower rates of transportation, and when they arrive at their destination, feel that while they are in a strange country, they are among friends; for, as a rule, in most colonies which we have visited, there are many families from the same locality.

COLONIES OF THE OLDEN TIME.

Massachusetts and Virginia, both representative States, the one of the North and the other of the South, were both originally settled by colonies. The sturdy Pilgrim Fathers who came over in the Mayflower and landed on the rocky shores of New England, and the founders of the "Old Dominion," the "Mother of Presidents," both left for their children a heritage of which they are not ashamed. Some of the most flourishing districts of Ohio, Kentucky, Illinois, and Iowa owe much of their progress to the fact that they were first settled by bands of energetic colonists, who, by their united action, accomplished in a short time what scattered settlers could not have done in many years.

SOUTHERN CALIFORNIA COLONIES.

The principal colonies in Southern California are the Riverside, located in San Bernardino county; Pasadena, located in Los Angeles county; Central California Colony, located in Fresno; Lompoc, of Santa Barbara; Washington Irrigated, of Fresno; Temperance, of Fresno; Westminster and Orange, of Los Angeles. Besides these we may properly add Anaheim, the third most important town in this county, and in proportion to its size, the most wealthy.

RIVERSIDE.

In the two preceding numbers of this magazine we have given a brief account of the present condition of the Riverside Colony. It is the largest and most systematically conducted settlement on the coast, and already some of the settlers are in receipt of considerable incomes from their respective places. It was founded by J. W. North and associates in July, 1871, and in 1874 its boundaries were enlarged and the matter taken in hand by Messrs. Evans and Sayward, who by persistent advertising and good management have brought the settlement up to its present flourishing condition. The supply of water is inexhaustible, and the land is so situated that it can easily be irrigated. The climate is equable, and not too warm; the rainfall is small, but is not required, as there are none in the colony who depend entirely upon the clouds for their supply of moisture for their trees and crops, at least not directly. The churches, schools, hotels, stores, shops, etc., are all good. The fruit cannery just started works up all the surplus fruit, and renders over-production an impossibility. Many orange groves are just coming into bearing, and the fruit is large, thin-skinned, and free from smut. The people are from the better classes of the East, and are temperate, industrious, and thrifty. The future of Riverside is assured; and as seeing is believing, those who may think its resources have been overrated are invited to personally inspect the colony, and observe what eight years of California sunshine and water have accomplished.

ANAHEIM.

Anaheim is, we believe, the oldest colony on the coast. It was founded in 1857, and at first was settled exclusively by thrifty Germans. The tract of land, before cultivation reclaimed it, would have dismayed even the stoutest heart, and the original proprietor, an old Californian, said that it was not fit for a pasturage for goats. The land was subdivided into fifty twenty-acre lots, a town site with an equal number of building lots being reserved in the center. Each colonist was entitled to a twenty-acre field and a town lot. An irrigating ditch carrying water from the Santa Ana river, five miles distant, was constructed with cross ditches, the borders of which were planted with trees. A recent visit to Anaheim satisfied us that this section is about to become one of the greatest wine-producing districts of the United States. The high prices of wines and brandies have stimulated the vineyardists to put forth their best efforts, and this year the grape crop will be immense. The homes of the original German settlers are plain, but comfortable, and their good example seems to have changed even the restless disposition of the Yankees who have invaded the settlement in considerable numbers. The climate is perfect, and invalids from the Eastern States have experienced much benefit. The water supply is assured, the land is easily worked and very fertile, and the town boasts of a good hotel, two banks, substantial stores, and various manufacturing enterprises. The local newspaper, the *Gazette*, is edited by R. Melrose, and has done much to spread valuable information concerning Southern California in the Eastern States.

CENTRAL CALIFORNIA COLONY.

A year ago we visited the Central California Colony, in Fresno county, which is the heart of the San Joaquin Valley. It was a dry year, little rain having fallen in the winter of 1878–79; and a companion remarked to us, as we crossed the brown and wind-swept plains, that there did not seem to be vegetation enough remaining outside of the irrigated districts to support a single sheep. At the colony tract, however, the settlers have, by careful cultivation and the liberal use of water, changed the seeming desert into a garden, and alfalfa fields, cornfields, vineyards, and orchards abound on every side. There are 30,000 acres in the settlement, a large portion being under cultivation. The land was purchased in 1876, of W. S. Chapman, a wealthy gentleman residing in San Francisco, who has certainly done all in his power to render the colony prosperous; but water difficulties have lately arisen which threaten to seriously embarrass the settlers. The climate is excessively hot in summer, and the progress which has been made by the colonists of the Central California tract certainly has been accomplished under difficulties.

PASADENA.

Few visitors come to this county who fail to be pleased with the beautiful little settlement seven miles east of this city. Semi-Tropic California has contained several articles relating to the wonderful progress of this gem of Los Angeles county, but as yet the half has not been told. Not that the people of Pasadena are situated in any Garden of Eden, where fruits grow spontaneously and their wants are supplied without labor. Far from it. The success of the colony is not occasioned by any wonderful fertility of soil, or great supply of water, but rather by the patient, well-directed efforts of the settlers, who make much out of little, and assist Nature in her efforts, instead of lazily throwing all the work on the old lady's shoulders, as is the case in some farming districts we know of. The colony has been in existence about seven years, the first settlement being made by residents of Indiana; hence, in its early days, it was called the Indiana Colony. The water is brought in pipes from the Sierra Madre mountains, which form a picturesque background to the settlement. There are two churches, one high school, one hotel, one store and post-office. Quite a number of orange trees are in bearing, and the exhibition at the Pasadena Citrus Fair last spring surprised and delighted visitors. While Pasadena is one of the pleasantest spots in the world in which to secure a home, capital is needed to commence with; and the same is the

case with all of our colonies. Work, and some money, are the essential elements of success.

LOMPOC.

Lompoc Colony is situated in the northern portion of Santa Barbara county. It is a temperance colony, the sale of ardent spirits being positively prohibited. The settlement has been in existence about six years, the land being purchased from Col. Hollister, of Santa Barbara. The population numbers about 1000, and is composed of a thrifty, law-abiding class of people.

ORANGE.

Orange settlement, Los Angeles county, can not properly be called a colony, as at no previous time has there been any mutual organization. It, however, in some respects, resembles the colonies above mentioned, and has improved greatly during the past few years. At our last visit, made about two months ago, we were surprised to find that what was five years ago a bare and dry plain, is now covered with a dense foliage of semi-tropical and deciduous trees, many in bearing. The water supply seems to be abundant; land is reasonable in price; society good, and church and school facilities excellent.

WESTMINSTER.

Westminster is located a few miles from Anaheim, and like Lompoc, is a temperance colony. The land is good, and being in the artesian-well belt, water is abundant. The settlers are drawn from the best class of Eastern people, and many have highly improved places. The colony has been in existence about six years, though organized in 1871. Two handsome church edifices and several stores, are located in the center of the tract.

WASHINGTON IRRIGATED COLONY.

The Washington Irrigated Colony, in Fresno county, is modeled after the Central California Colony, which it strongly resembles. It is in the hands of an enterprising real estate dealer of San Francisco, and quite a number of settlers are already on the tract. Undoubtedly the land is well adapted to grape-growing and raisin-making, but the hot climate is a serious drawback to those who have become accustomed to the cool sea breezes of the Pacific ocean.

We have endeavored in this article to give a brief sketch of the principal colonies of Southern California. The system seems to be best adapted to the country, and we should like to see many more started. The Southern Transcontinental Railroad will be completed in a few months, and many tracts of land now lying idle will be developed to their fullest capacity. In conclusion, we will say that any persons who have any doubts concerning the colony plan will do well to examine, as we have done, those in existence. While it is not claimed that the system does away with all the hardships of pioneer life, it is certain that it is the best way to secure a pleasant home on this coast.

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The management of the Pacific Coast Steamship Company's business has been characterized by a spirit of liberality and fairness that has popularized this route as the great shipping and traveling medium with the people of this coast. Their ships are kept in the best possible trim, always safe and seaworthy, able officered and every attention given to forward the interest of their patrons. The rates of freight and fare are as low as can reasonably be expected.

In this city, the company is ably and faithfully represented by their agent, Mr. H. McLellan, whose office is over the Commercial Bank, an signature of which stands at the top of this column. Mr. McLellan is a thorough business man, and the interest of the company will never suffer under his management. The public who patronize the line also find him always affable and prompt in extending every facility for their accommodation.

DAIRYING AS A SPECIALTY.

The *American Dairyman* argues with good ability that dairying is a special business and needs special training in order to carry it on with success. It says: "A man can not be a woolen hopper or a chief today, and a dairyman to-morrow. There are years of study and preparatory work essential to success, and a knowledge of the science as well as the art is needed. It is the experienced dairyman only who realizes how much there is to be learned before the art is acquired. Little mistakes in practice is gained. It is he who gives the population for choice products, who knows it is well adapted, well managed, and made profitable." We believe that this fact is becoming more and more apparent. We know of several young men from the city who have gone West recently and put themselves under special instructions to learn the dairy business, preparatory to entering upon it themselves. They are parties who can command the necessary capital when necessary, but their parents prefer to have them go through a regular course of training before investing a dollar in the business. We have some trained dairymen in Southern California, a country that will, in the near future, be the greatest dairy country in the world.

Mining Banner: The minerals from all the principal mines of Arizona, as now collected by Messrs. Paul & Kimball, of Tombstone, promise to be one of the grand features of the Horticultural Exposition. Persons interested in mining operations will have an opportunity of becoming acquainted, at a glance, with all the facts about them from these gentlemen, as they will be present each day and give information about the specimens and the mines they are from.

A western paper takes half a column of [illegible] to advertise "Cast Iron Socks." But, good Scott! who ever said it dainty. *Truckee Republican.*

LEMONS.

The excessive heat and frequent injuries from the too frequent use of water in warm weather, make the following suggestions regarding the use of lemons during the summer valuable: Most people know the benefit of a lemonade before breakfast, but few know it is more than doubled by taking another at night also. The way to get the better of all bilious symptoms without pill or quinine, is to take the juice of one, two, or three lemons, as the appetite craves, in as much ice water as makes it pleasant to drink, without sugar, before going to bed. In the morning on rising, or at least half an hour before breakfast, take the juice of one lemon in a goblet of water. This will clear the system of humors and bile, with mild efficacy, without any of the weakening effects of calomel or Congress water. People should not irritate their stomachs by eating lemons clear; the powerful acid of the juice, which is almost corrosive, infallibly produces inflammation after a while. But properly diluted, so that it does not burn or draw the throat, it does its full medicinal work without harm, and taken when the stomach is clear of food, has opportunity to work on the system thoroughly.

ARIZONA MINERAL CABINET,

TO BE EXHIBITED AT THE NORTHEASTERN FAIR.

We have just had the pleasure of looking in upon the rare specimens sent into Paul & Kimball. The collection is a magnificent sight for any one to behold. It demonstrates the magnitude and richness of the wonderful mineral deposits of Southern Arizona.

The collection is only in its infancy. Rich and precious gems of heavy tearing, precious metal ores are daily coming in, and long before the day of shipment they will have a cabinet representing hundreds of valuable mines, and worthy of the attention and examination of the experts and capitalists of the world. This enterprising firm will exhibit this grand cabinet of ores at the "Southern California Horticultural" Fair, at Los Angeles, in October, and at its close will take them to San Francisco, and thence to Chicago, St. Louis, New York, and Boston. One of the firm will accompany them, and will properly illustrate and advocate the great mineral wealth of Arizona.

Each specimen will have the name of the mine, the district and the owner's property ticketed out.—*Tombstone Epitaph.*

Disaster and rumors of drought in the East and in the West, and a great deal too in March, and do not expect another until November, in fact, it seems to be a time would be a calamity. Our crops are secured with a fall of 17 to 20 inches of rain in the Winter. Many crops are grown even without irrigation during the Summer months. A sure crop is always counted on when under the ditch. Our Nebraska, Kansas and Texas friends will have to adopt the irrigation system or quit farming.

THE CYPRIAN AND BEES OF THE HOLY LAND.

Mr. D. A. Jones, of Canada, has recently returned from the Isle of Cyprus and the Holy Land, where he has been collecting bees for the purpose of importing to this country. He has brought over a large importation at a very heavy expense.

The Cyprian bee is said to be a great improvement on the American bee, as well as the Italian. They are a distinct race, are of classic fame, and have been confined to their ocean-bound home for thousands of years. Their superiority consists in breeding earlier and later in the season, flying farther and swifter than our bees, protecting themselves against moths and other enemies of the bee, building more worker comb and less drone. They have a reddish-golden strip across the back between the wings, and are partially covered with long hair. The abdomen is of a light golden color.

The Holy bee (so called from its being a native of the Holy Land), is quite similar to the Cyprian bee, not so hairy, and more of a golden cast; is very prolific, and in times of scarcity will travel an incredible distance for honey. Another year these bees will most likely be introduced upon this coast. Mr. Jones will furnish queens at from $10 to $15.

Thos. G. Newman, editor of the *American Bee Journal*, has recently received a diploma of honorary membership of the Central Association for the encouragement of bee culture in Italy.

Mr. C. N. Abbott, editor of the *British Bee Journal*, has invented a comb-foundation on a board one-sixteenth of an inch thick for extracting. It is said to work well.

Mr. A. J. King, editor of the *Bee-keeper's Magazine*, in New York city, has a fine apiary on the tops of flat-roofed houses. Some of the city papers speak very highly of it.

He who reads *Gleanings in Bee Culture*, will not fail to discover that its editor, A. I. Root, is remarkable for energy, perseverance, good nature, and much forbearance. These are qualities that will insure success.

Cool weather; heavy fogs; sprinkling rain; but little honey; little price for it; bees in *status quo*.

THE DISTRICT CONVENTION,

The coming convention of apiarists, to meet in Los Angeles on the twentieth and twenty-first of October, during the week of the agricultural and horticultural fairs, will doubtless be the largest assemblage of apiarists ever before known on the coast. Although called under the auspices of the District association (and not under a county association, as published in some of the city papers), it is really a state convention—one to which all apiarists of the State are invited to participate, as well as those who feel an interest in the science of apiculture, both male and female. It is hoped that those who design taking part in the convention will come prepared to deliver their views, either orally or in writ-

ing, on whatever topic of interest they may see proper to discuss. The object of the convention being to benefit each other, and advance the science of apiculture generally among the fraternity on the coast.

It has been suggested by the president, C. J. Fox, that those who will prepare papers on different topics will forward their names and title of subject to S. Lovering, of Los Angeles, acting secretary, by the tenth of October, so that a programme may be arranged, and the order of business systematized.

BEE-KEEPERS' MEETING.

At the last regular meeting of the Bee-Keepers, a resolution was offered relative to the awarding of premiums in the apicultural department in the coming Horticultural Fair to be held in Los Angeles in October next, which, after being discussed and amended, was adopted as follows:

Resolved, That it is the sense of this association that the following points govern the judges in their awards of premiums in the October fair, in the order named in class 24:

1. Honey—Extracted, flavor, body, and color.
2. Honey in the comb—Flavor, color, and marketable.
3. Honey-producing flowers—The greatest number of wild flowers known to produce honey, pollen, or propolis.
4. Best display of honey—Marketable condition.
5. Wax—Texture and color.
6. Comb foundation—Body and color.
7. Honey extractors—Facility for handling combs, draft, and durability.
8. Bees—Full colony and purity of Italian stock.
9. Queen—Purity of Italian stock and size.
10. Sugar made from honey—Flavor and color.
11. Vinegar.
12. Packages of tin—Workmanship and material.
13. Packages of wood, material and workmanship.
14. Candy—Flavor, solidity, or freeness from running.
15. Best fruit put up or preserved in honey.
16. Best honey cake.

It was further ordered that the following additional premiums be offered by the association: Best wood packages for honey, $5, or diploma; the same for tin. For best honey cake, $2.

The following committees were appointed: To superintend and arrange the apicultural department at Horticultural Exposition, Messrs. Lovering, Bothel, Wilson, Bagly, Pheasants, Mrs. Butler, Mrs. Dr. Lindemann, Mrs. Benedict, Mrs. Dooks, and Mrs. Lovering. Financial Committee, Messrs. Hackett, R. J. Bagly, S. Lovering, J. E. Pheasants.

The Los Angeles *Journal* says that there men rented a bee ranch near Pasadena, spending $100 on outfit, and have made 30 tons of honey, worth at present $3600.

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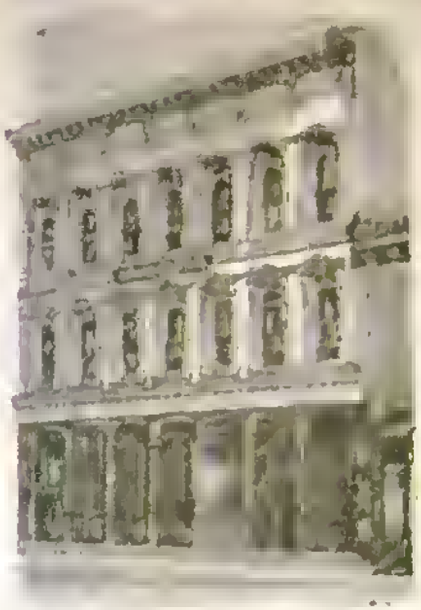

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Los Angeles, Cal.

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Below we give a partial list of the premiums offered. Persons wishing the complete catalogue and rules, can have the same free by addressing the secretary:

FLOUR AND GRAIN.

Best display of grains.....$50 00
Best fifty-pound sack of flour.....
$5.00 and Silver Medal
Best twenty-five-pound sack of corn meal.....
Silver Medal

Special premium by Lankershim & Co.

Best sack of wheat—from machine.....15 00
Best sack of barley.....10 00
Best sack of rye.....Silver Cup and 3 00
Best sack of oats.....Silver Vase and 3 00
Best sample of hops, not less than two hundred pounds.....Silver Cup and 3 00
Best sample blue grass seed, not less than one half bushel.....Diploma
Best bushel alfalfa seed.....Silver Medal and 5 00
Best bushel yellow corn.....Silver Cup and 5 00
Best bushel white corn.....Silver Vase and 5 00
Best bushel early corn.....Silver Cup

Special premium by E. F. Spence.

Best and largest six ears of corn.....5 00
Best exhibit garden seeds of California production, not less than twenty-five varieties, and over one year old.....Diploma and 5 00

VEGETABLES, ROOTS, ETC.

All articles in this class are to be raised by the exhibitor, except the table or collection of vegetables.

Best display of Irish potatoes.....$5 00
Best display sweet potatoes.....3 00
Best display sugar beets.....5 00
Best display tomatoes.....5 00
Best six heads of cabbage.....2 00
Best six heads of cauliflower.....2 00
Best display of onions.....5 00
Best and largest display of pumpkins and squashes, not less than ten.....10 00
Best ten watermelons.....5 00
Best ten muskmelons.....5 00
Best display of beans.....5 00
Best display of castor oil beans.....3 00
For the best table of vegetables exhibited by one person.....10 00

CHEESE AND BUTTER.

Special premium by Lee J. Thompson, grocer, 96 Spring street.

Best display of cheese.....$15 00
Best cheese.....10 00
Best display of dairy products.....Silver Medal
Best display of butter in rolls, not less than three pounds.....Silver Medal and 7 00
Best firkin, not less than twenty-five pounds, at least three months old.....Silver Medal

BREAD, ETC.

Special premium by Dessing, Palmer & Co., Capital Mills.

Best home-made bread from their flour.....$15 00

Special premium by C. C. Burr & Co., manufacturers of Champagne Baking Powder, 18 Pine street, San Francisco.

Best biscuits made from their baking powder.....10 00
Best sponge cake made from their baking powder.....10 00
Best display by bakery.....Silver Medal
Best crackers, butter.....Diploma
Best crackers, sweet.....Diploma
Best crackers, Boston.....Diploma
Best domestic corn bread.....Silver Cup
Best domestic rye bread.....Diploma
Best domestic brown bread.....Silver Cup
Best display of domestic bread.....Silver Medal
To the young lady, not over sixteen years of age, for making the best bread.....Silver Medal

BEET SUGAR.

Best exhibit of beet sugar industry.....Gold Medal

NORTHERN FRUITS.

Special premium by Woodhead & Gay, commission merchants.

Best display of California fruits.....$25 00
Best display of fruits grown by one man.....
Silver Medal

APPLES.

Best display.....$10 00
Best twelve varieties.....5 00
Best six varieties.....3 00
Best three varieties.....2 00

PEARS.

Best display.....$10 00
Best twelve varieties.....5 00
Best six varieties.....3 00
Best three varieties.....2 00

PEACHES.

Best exhibit.....$5 00
Best six varieties.....3 00
Best one variety.....2 00

PLUMS.

Best exhibit.....$5 00
Best five varieties.....3 00
Best one variety.....2 00

FIGS.

Best green figs.....3 00
Best display of Japanese persimmons.....5 00

GRAPES, RAISINS, ETC.

Finest display of grapes.....Silver Medal
Best twelve varieties of table grapes, not less than three bunches each.....$10 00
Best one variety of table grapes, not less than three bunches.....3 00
Best twelve varieties of white grape, not less than three bunches each.....10 00
Best one variety of white grapes, not less than three bunches each.....3 00

Special premium by E. F. Spence.

Best and largest cluster of grapes.....5 00
Best and cheapest tank or cask for wine or brandy for storage.....Diploma
Best exhibit California raisins.....Silver Medal
Best exhibit California raisins, crop of 1879.....
Silver Medal

HONEY.

Special premium by Hatch & Barclay, commission merchants, San Francisco.

Best ten pounds extracted honey.....$20 00
Best ten pounds comb honey.....10 00

Special premium by J. H. Book, Los Angeles.

Best ten pounds extracted honey by Los Angeles County Apiarists.....15 00

Special premium by "Semi-Tropic California," Carter & Rice, publishers, to their subscribers.

Best ten pounds of honey.....10 00
Best display of honey flower.....5 00
Best display of honey.....Silver Medal
Best twenty pounds wax.....Diploma
Best comb foundation.....Diploma
Best honey extractor.....Bronze Medal
Best colony bees.....Bronze Medal
Best Italian Queen.....Diploma
Best sugar from honey.....Diploma
Best vinegar from honey.....Diploma

Special premiums by Los Angeles County Bee Keepers' Association.

Best package for honey, five, ten, and fifty pound cans.....5 00
Best five pounds candy from honey.....2 00
Best display of fruit put up in honey.....5 00

PRESERVES, PICKLES, ETC.

[Six jars of each required.]

Best display of fruit, in glass.....Silver Cake Basket
Best jar guava jelly, in glass.....Silver Vase
Best jar of raspberry, in glass.....Silver Cup
Best jar red currant jelly, in glass.....Silver Cup
Best jar blackberry jelly, in glass.....Silver Cup
Best jar strawberry jelly, in glass.....Silver Cup
Best jar quince jelly, in glass.....Silver Vase
Best jar apple jelly, in glass.....Silver Cup
Best jar blackberry jam, in glass.....Napkin Ring
Best jar raspberry jam, in glass.....Napkin Ring
Best display of preserves, in glass.....
Silver Spoon Holder
Best display of pickles.....Silver Cup
Best display of brandied peaches.....Silver Vase
Best display of confectionery.....Diploma

DRIED AND PRESERVED FRUITS, NUTS, ETC.

Best twelve bottles olive oil.....Silver Medal
Best twelve bottles pickled olives.....Silver Medal
Best ten pounds dried apples.....Silver Cup
Best ten pounds dried pears.....Silver Cup
Best ten pounds dried peaches.....Silver Cup
Best ten pounds dried plums.....Napkin Ring
Best ten pounds dried apricots.....Silver Vase
Best ten pounds dried nectarines.....Napkin Ring
Best ten pounds dried figs.....Silver Medal
Best exhibition of dried berries, in variety.....
Bronze Medal

Exhibitors of dried fruits must furnish written statement of manner of drying and treatment in full, from time of picking to placing on exhibition. The same rule applies to the exhibitors of olive oil and pickled olives.

CULTIVATED NUTS—RAISED BY EXHIBITOR.

Best display of nuts.....$5 00
Best half bushel English walnuts.....5 00
Best peck soft-shell almonds.....3 00
Best peck peanuts.....2 00

Best package for shipping fruit.....Diploma and 3 00
Best package for shipping grapes.....Diploma
Best package for shipping peaches.....Diploma
Best package for shipping plums.....Diploma
Best package for shipping pears.....Diploma

FRUIT TREES.

Best exhibit citrus trees.....Silver Medal
Best seedling orange tree.....Bronze Medal
Best budded orange tree, on orange stock.....
Bronze Medal
Best budded orange tree, on any other stock.....
Bronze Medal
Best budded lemon tree, on lemon stock.....
Bronze Medal
Best budded lemon tree, on any other stock.....
Bronze Medal
Best exhibit of deciduous fruit trees.....Silver Medal
Best orange or lemon tree in fruit, taken from orchard.....Silver Medal

WINES AND BRANDIES.

Special premium by J. De Barth Shork.

Best display of California wines.....$25 00

Twelve bottles of each of the following constitute an entry:

Best display of wines and brandies by one maker.....Silver Medal
Best grape brandy of its age.....Silver Medal
Best white wine of its age.....Silver Medal
Best red wine of its age.....Silver Medal
Best California Port of its age.....Silver Medal
Best California Sherry of its age.....Silver Medal
Best California Sparkling of its age.....Silver Medal
Best Angelica of its age.....Silver Medal

FLOWERS.

Best and largest collection of flowering, ornamental and foliage plants, in pots.....
Diploma and $20 00
Best collection from new and rare plants.....5 00
Best collection of roses in bloom.....5 00
Best collection of fuchsias in bloom.....5 00
Best display of cut flowers.....Diploma
Best display of bouquets.....Diploma
Best collection of plants suitable for greenhouse, conservatory, and window culture.....Diploma
Best display of hanging baskets, containing plants.....10 00

HORTICULTURE.

Best essay on the use of twenty acres of land for family support and profit.....Silver Medal
The original agricultural and horticultural experiment of the greatest general utility.....Silver Medal
Best arranged and furnished tent of Fair visitors.....$10 00

BABY SHOW.

Special premium by Gillmore, Dalkie Store.

First premium.....Baby Buggy—$30 00

Special premium by E. H. Sweitzer, jeweler.

Second premium.....Child's Set—10 00
Third premium.....Silver Cup—5 00

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The largest stock of Drugs, Chemicals, Patent Medicines, Perfumeries, Toilet articles in Southern California, at the very lowest possible prices.

Agents for Humphrey's Homeopathic Specifics and Holman's Liver Pad.

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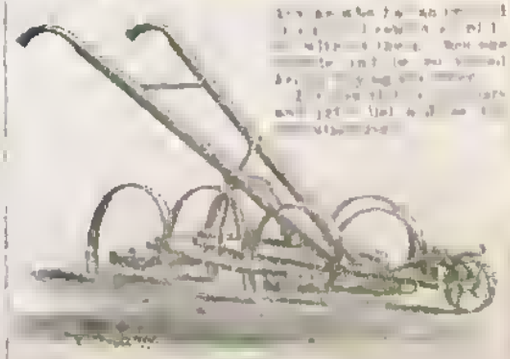

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Is prepared to place [illegible] real estate [illegible] at [illegible] rates of interest without delay.

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The Pasadena Land-office.

The climate, soil, water, system, [illegible] scenery, [illegible] and [illegible] advantages of Pasadena are now [illegible] and widely known to [illegible] at any hands. [illegible] offer [illegible] in all parts of the country, [illegible] kind of [illegible], at your own price, [illegible] per acre [illegible]; and I will take pleasure in [illegible] the country.

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THE GARDEN SPOT OF THE WORLD.

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Good Stock. Low Pr[illegible] and Fair Dealing.

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Eggs that will Hatch. Fowls and Chicks for Sale

[illegible]

CHAS. P. JILLSON,

Corner Fourth and Mill Streets, near Woolen Mill.
LOS ANGELES, CAL.

[illegible]

PEAR PERKIN.—Nearly all pear growers agree that all kinds of pears should be picked while green and ripened in the house or in transit to distant markets. There is, as a matter of course, a diversity of opinion as to when, and how, and just how to handle to ripen them. J. H. Pierce, a practical pear grower, says summer and early fall pears should be picked before they begin to turn, and when they are nearly grown; should be handled with great care to avoid bruising, and should be placed in barrels or boxes in a room or cellar, where the temperature may be kept at about seventy degrees, and a moderate degree of moisture maintained. After being kept in such a place a few days they will begin to turn, and some of them will mellow, and then they should be sold or used before they soften. The boxes or barrels they may be placed in should be covered with papers to exclude the light and prevent the escape of the aroma, care should be exercised to avoid placing them so deep as to allow of the generation of much heat, which might carry the fermentation too high and destroy the fruit. Pears for shipment may be wrapped in a paper and packed in boxes for shipment the second day after picking. When one has the facilities for so doing he may improve the color, and possibly the flavor, by spreading them on shelves between newspapers. This ripening between papers on shelves in a room where an even temperature can be maintained, seems to give the most satisfactory results of any method. The manner in which pears thus treated will color is truly wonderful, ripening so as to be solid, juicy, and sweet, and not insipid or rotten at the core, as is too often the case with fruit ripened on the trees. Several pickings should be made from the same trees, leaving the greenest on the trees as long as they will keep green. Mulching and irrigating the trees will help prolong their season by keeping up the vigor of the trees. Splendid specimens for exhibition purposes may be obtained by leaving a few of the largest and finest specimens on a tree and picking all others early.

Rabbits will not eat the bark of orange trees if the body of the tree is rubbed with a bar of soap; rub the tree from the ground up as high as the rabbits can eat.

Clerk (who has called to see the gas meter)—"Is yours a wet or dry meter, madam?" Young wife (who does not like to show ignorance)—"Well, it is rather damp, I'm afraid!"

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FRUIT DRYER & BAKER.
OVER 11,000 IN USE
THE BEST IN THE MARKET
SOLE ASSIGNEE of C. VANDERIRON
AGENTS WANTED
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Poultry.

The Light Brahmas are said to be unexcelled as layers by any other fancy breed.

Brown Leghorns are the hardiest and best layers of all other kinds, but too small for market.

Chickens must have shade during hot weather; and the water they drink must be fresh, and also kept in the shade.

To keep fowls bright and healthy, give Gillson mixture—one tablespoonful to a quart of drinking water. It is made thus: "One pound of copperas and one ounce of sulphuric acid, dissolved in a little warm water, then add one gallon of hard water." It can then be put in a jug or stand in an open vessel, and is always ready for use. This will be found an excellent tonic, and is very cheap.

Three weeks are sufficient to fatten fowl. Keep in large coops and feed and water regularly. Turkeys can be best fattened running at large, if they are fed all they can eat.

HOW TO KEEP CHICKENS.

Keep a record of your work. Do not burden your mind with trying to remember either your success or failure. If you make an experiment, record it, so that you can trace it up for reference if it is a success; if a failure, you can protect yourself against it another time. Do not allow the bones from the table to be thrown into the dust heap, or lie around the yard; throw them into the fire, burn them a little, crush and give them to your fowls. If bread is burned, or anything else that is cooked in the house, do not throw it away, but use it as charcoal for your birds. If they have been obliged to run in the orchard or meadow to pick up their living as they can and feeding on what they could get, their eggs and flesh are likely to taste; feeding charcoal in any shape will remedy the evil.

POULTRY YARD NOTES.

Fowls during the moulting season need some tonic, the best of which is tincture of iron, mixing a few drops with the water they drink. Assafœtida, garlic, and onions are good stimulants for the lungs and digestion. Cayenne pepper and powdered gentian are also good. Charcoal broken into small bits is a great purifier of the blood; sulphur is useful but needs care, it kills insects, but is liable to hurt young chickens, if used too freely. Insect powder is safer. The *American Poultry World* gives a receipt as follows: "For chicken powder, four ounces each of copperas, cayenne pepper, sulphur and rosin; pulverize and mix; two spoonfuls for a dozen fowls, given twice a week."

Coal oil, if rightly used, is of value to the poultry-keeper. The perches may be sprinkled with it, and also the nests. But it must not be put where it will touch the egg in the nest, or bodies of the hens, for then it does harm, being too strong. If, for instance, eggs are covered with coal oil, their vitality is said to be destroyed entirely.

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EXCELLENT LOCATION and view. Within one mile of R. R. Railroad and Telegraph Station, Post Office and School. Unexcelled for salubrity and healthfulness. Over 100 acres. Good title. Small stream of water, choice young orchard, and vines bearing. Mostly fenced. House new, 9 rooms; barn, outbuildings, etc. *The cheapest Farm in Southern California.* For particulars, address,

WELLWOOD MURRAY,
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REASONS WHY
Woodmanse's Wind-mill
IS AHEAD.

1st. Its Construction is simple, and its movements are so complete that they do not get out of order.
2d. The Wheel and Vane being in straight line with its axis, and having no side vane, must necessarily always face the wind.
3d. Its Movement is steady and noiseless.
4th. It has but Three Joints to work the Mill, while others have as many as eighty or one hundred. In this particular we claim a great advantage over all other Mills.
5th. The Frame is very Strong, Simple and Cheap.
6th. It has Anti-Friction Balls, upon which it revolves on its axis, needing no oil, and enables it to turn in the slightest breeze. Balls and bearings Cloth Hardened.
7th. The weight is a complete weight of varying resistance, giving Mill a steady, regular motion.
8th. All our Mills are fully Warranted.
Send for Catalogue.

F. G. HANNA, Agt., Los Angeles.

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NOT A DRUG

A NEW TREATMENT
For Consumption, Asthma, Bronchitis, Dyspepsia, Catarrh, Headache, Debility, Rheumatism, Neuralgia, and all Chronic and Nervous Disorders. It is taken

BY INHALATION
And acts directly upon the great nerves and organic centers, and cures by a natural process of revitalization.

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A Treatise on Compound Oxygen, giving the history of this new discovery, and a large record of most remarkable cures. Write for it.

ALSO SENT FREE
"Health and Life," a quarterly journal of cases and cures under the Compound Oxygen Treatment. Nos. 1 and 2 now ready. Address—

DRS. STARKEY & PALEN,
1109 & 1111 Girard St., Philadelphia, Pa.

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We have established a Depository for our
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All the latest novelties and new styles received weekly.

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Of the most desirable land in Southern California for Semi-Tropical

FRUIT GROWING

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Beautiful and Healthful Homes.

These lands are located in the Santa Ana Valley, San Bernardino County, 50 miles southeast of Los Angeles, and 7 miles south of Colton, a station of the Southern Pacific Railroad.

Twenty-eight miles of irrigating canals are now completed, and there is abundant water in the dryest seasons to irrigate all the lands offered by the Company. About 1,000 inhabitants are now in the Colony: enterprising and intelligent people. We have good schools, four church organizations, daily mail, telegraph line, newspaper, etc. Lands are offered at moderate prices and on liberal terms, and no lands are sold but to actual settlers. I invite all seeking homes in this portion of the State to call and see me before purchasing elsewhere. Every facility will be afforded for the examining of the lands offered.

S. C. EVANS, President R. L. & I. Co.

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This Association is now offering for sale on easy terms some of the finest lands in California. They are situated about 1000 feet above the sea, in the rich and beautiful valley of San Gabriel, protected on the north by the Sierra Madre Mountains, while on the west a range of hills and mountains tempers the chill of the sea breeze as it passes over them for forty miles before reaching this locality. This combination of advantages makes it a delightful residence for invalids, while the lands produce all the grains and fruits of the temperate zone, and many of the products of the tropics. The land is supplied from large reservoirs fed by mountain springs, and carried in pipes along all the avenues of the tract which is divided into ten-acre lots, with water rights for every lot. This property is but seven miles from Los Angeles, and near the line of the Southern Pacific Railroad. For prices and full details, address

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Forwarding

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Commission Agent,

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Very Low Prices, and on Easy Terms and Low Rate of Interest.

Hundreds of flowing Pipe Wells. Water near the Surface. Rivers on two sides; ever-flowing creek through the tract. Front on the ocean.

Transportation and passage by steamship or railroad.

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23 HOURS FROM SAN FRANCISCO.

Convenient to markets and competing lines of shipments for produce, etc., etc.

The unsold land for sale or lease in sections or fractions, by

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Or apply to

Wm. R. Olden,
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Or concerning Westminister Colony, to REV. ROBERT STRONG, Westminister, Cal.

Terms, one-fifth cash, balance on interest at 10 per cent. Send for Circulars and Maps.

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Wholesale and Retail Dealers in

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FINE

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No pains will be spared to make guests comfortable in every way.

A large reading room open night and day.

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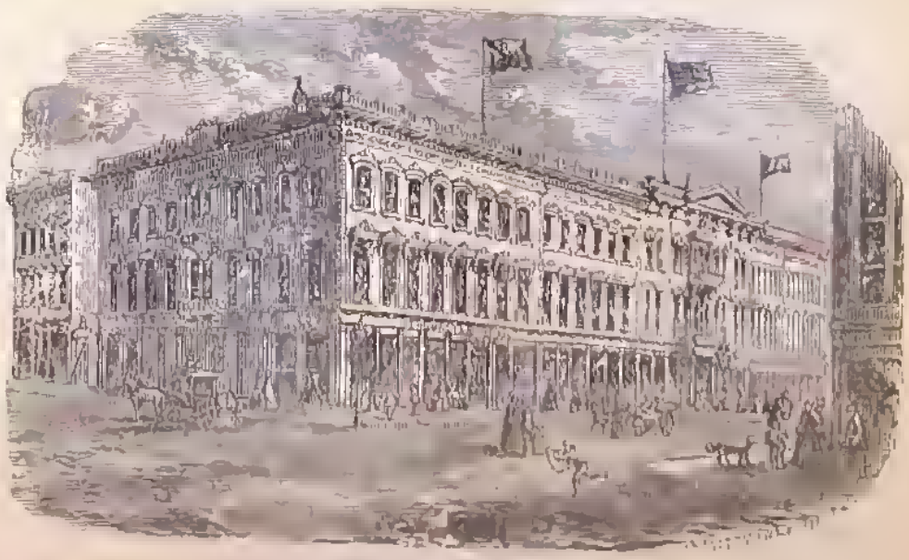

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OCTOBER

SEMI-TROPIC CALIFORNIA

Devoted to Agriculture, Horticulture, and the Development of Southern California.

LOS ANGELES, CAL.

CARTER & RICE,

PUBLISHERS

VOL. III. 1880. No. 10.

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FOR SALE [illegible] lands in different parts of the County and in the City of Los Angeles.

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Los Angeles City, Cal.

Semi-Tropic California

AND

SOUTHERN CALIFORNIA HORTICULTURIST.

VOL. III. LOS ANGELES, CAL., OCTOBER, 1880. No. 10.

PEACHES AND CREAM.

Given us a Jersey cow and a Delaware peach orchard, and we have all the conditions of an Olympian banquet. The gods used to take great interest in earthly comforts at the time that their intentions were invited, and their high station was conceded. They had as intense appreciation of the mortal beauty of women as a Greek sculptor, and in most of the luxuries of the classic era the enjoyments of man were but imitations of the supposed revels of deities. As the latter were not averse to sharing the good things of earth with those inferior beings who, subject to these higher powers, were sent to subdue and control the planet, we doubt not, that had the old familiar relations been continued up to the present time, we should find even old Jupiter forsaking his amours, to order up a thousand crates of Rareripes by the Mount Ida express. Bacchus might for once have dreamed of reform, forgetting that the first duty of a god was to set an example of beastly intoxication to mundlin and imitative man, but the blushing cheeks of these fragrant spheres caught the reveler's vision. Apollo might well have congratulated himself upon his greatest work, as he gazed in rapture over an expanse in which the beams he had scattered had achieved their greatest triumph; and Minerva — well, she was wise, and would probably have played milkmaid with that Jersey cow and plucked the ambrosial fruit without stopping to inquire to whom the orchard belonged.

We merely recall the interest of gods and goddesses in such matters in order to emphasize the conditions of life which now justly claim our gratitude, and to show wherein we are, in some respects, superior to the angels, who have left behind them all appreciation of peaches and cream. They may have risen to higher joys, but could we be assured of this, a great many people would try much more ardently to prepare themselves for a participation in the heavenly fruitage than they do at present. The most pious children are usually those to whom heaven means unlimited plum-cake, with eternal immunity from colic. The Indian speaks of it as the happy hunting ground; but the Christian conception of it ought to rise at least as high as an expansive paradise where the peaches and cream are never exhausted. Now we think of it, has not John Burroughs christened the cow "Our Rural Divinity," and in attempting to describe a peach he has wandered in metaphysical sloughs not peculiar to him; so we take it that even his brilliant gift of word-painting was not equal to the theme. The tongue of man can declare the idyl of the peach to himself alone, and that by absorption, by a wondrous affiliation of papillæ and pulp; but by no amount of wagging can it impart to others the peculiar qualities it has felt, but can not express. Pomona's best gifts are with us now, and in their abundance let the heart of man rejoice.—*Boston Post.*

DEMAND FOR SEMI-TROPIC FRUITS.

The orchardists of California are deeply interested in the foreign fruit market, both exports and imports. This State produces many fruits for which there is a demand in Europe and other countries. But it is necessary for our producers to realize how large the home market is. So long as Mediterranean oranges are sold in New York there is room for new orange groves in California, and the same is true of other semi-tropic fruits, nuts, etc.

The annual report of the Custom-house authorities of New York for the year 1879, shows how large and important the trade in foreign fruits has become. An increase is visible in the imports from both the West Indies and the Mediterranean ports. The dangers and damages incident to sea voyage are such that large risks are run by the importers. During the year, for instance, out of 889,729 boxes of oranges imported from the Mediterranean ports the loss was 50 per cent.; out of 900,505 boxes of lemons the loss was 26 per cent. The total number of oranges in those boxes was 239,651,251; of lemons 315,176,750. It required 172 vessels, mostly steamers, to convey this across the Atlantic. In addition to this, there were, during the year, 44,365 barrels, and 56,721 half barrels of grapes imported, largely from Spain. Prices in New York were low, the fruit arriving in bad order, owing to a parasitic disease upon the oranges, which has caused much alarm among the producers.

West India oranges last year were imported into New York to the extent of 16,929,121, of which 14 per cent. were lost. These were shipped in barrels by sailing vessels and steamers, and from Jamaica, Havana, Nassau, and other points. Of limes, the importations were 988 barrels; loss 33 per cent. Among other fruits which figure in the list are bananas, cocoanuts, and grape-fruit, shaddocks, plantains, mangoes, sapodillas, alligator pears and many others. Fruit is imported into the United States from Mexico, Central America, Venezuela, Colombia, the West Indies, England, France, Spain, Portugal, Italy, Greece, and Turkey. As a question of values and duties the green fruit, as enumerated above, which was entered at New York last year, was worth $3,856,540 and paid duties of $689,441.

In this statement no account whatever has been taken of dried figs, olives, and other fruits; or of the nuts, such as filberts, walnuts, and almonds which are brought in cargoes to New York. It is further to be remembered that these figures are only for one port of entry, and many other cities along the Atlantic sea board receive direct importations of semi-tropic fruits. The lower Mississippi valley is supplied from New Orleans. Galveston and Mobile also import West India fruits. Aside from those distinctive tropic fruits which can not possibly thrive in California, there yet remains a wide margin for future growth of semi-tropic fruit industries on the coast. It is a noteworthy fact that the tropical fruit importations into New York for 1879 exceeded those of 1878 by nine per cent. Evidently there need be no immediate fear of overstocking the markets of the United States with home-grown fruits.—*S. F. Bulletin.*

HOW MUCH WHEAT SEED TO THE ACRE?

In a late *Rural* a Virginia contributor said that one and a half to one and three quarter bushels of wheat seed to the acre is the right quantity. On this head I will give my experience for three years: In 1877 I sowed one peck in rows 18 inches apart, and cultivated in the spring—result, 35 bushels. The average crop of the neighborhood was about ten bushels per acre. In 1878 I used 40 pounds of seed on two and one third acres, and got 70 bushels. It was a good wheat year, the average yield on my neighbors land being from 15 to 25 bushels per acre. In 1879, I sowed 100 pounds of seed on five acres in rows 12 inches apart, and harvested 18 bushels per acre. This was a poor wheat season, the average yield in the neighborhood being from five to ten bushels per acre. I shall sow the last named amount again this fall. If our Virginia friend will again try this peck of seed with the product of which he was not content, on land less heavily manured, he may be better satisfied. If farmers would experiment more, they would learn more, to their profit.

Daviess Co., Ky. W. H.

SEMI-TROPIC

CALIFORNIA

AND

SOUTHERN CALIFORNIA HORTICULTURIST.

Devoted to Agriculture, Horticulture, and the development of Southern California.

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All subscribers who do not give express notice to the contrary will be considered as wishing to continue their subscriptions.

If subscribers move to other places without informing the publisher, and the paper or magazine is sent to the former direction, they are held responsible.

Any person who takes a paper or magazine regularly from the post-office, whether directed to his name or another, or whether he has subscribed or not, is responsible for the pay.

If a person orders his paper or magazine discontinued, he must pay all arrearages, or the publisher may continue to send until payment is made, and collect the whole amount, whether it is taken from the office or not.

The courts have decided that refusing to take newspapers and periodicals from the post-office, or removing and leaving them uncalled for, is *prima facie* evidence of intentional fraud.

If this paragraph is marked it means that your subscription is past due, and you are requested to remit $1.50, the subscription price for one year. Please remit at once, or notify us of your pleasure in the matter.

We have perfected arrangements for making the SEMI-TROPIC CALIFORNIA *the* horticultural and agricultural magazine of California. Able and practical men and women have been engaged to write for us, and the engravers' art will be used liberally in illustrating all important subjects. All we ask is the continued support heretofore given, and as many new subscribers as want a paper devoted to their interests.

PRESIDENT HAYES and wife, General Sherman and daughter, Secretary of War Ramsey, General McCook, Commissioner Le Due, and many other distinguished visitors will be present at Horticultural Fair.

We are glad to be able to inform our readers, and answer many inquiries as to whether the sugar beet industry is a failure. It is not. Of this product the San Francisco *Merchant* says: "The sample of crude (unrefined) beet sugar forwarded has been submitted to several of our largest jobbers, and to one of our refiners, and is unanimously said to be the nicest sample of crude beet sugar seen in this market. The peculiar smell that beet sugar has is barely perceptible in this sample, and its value is quoted at 9¼ to 9½ cents." This sugar was made from Los Angeles sun-dried beets. The sugar was manufactured by the Standard Sugar Co., Alvarado, California, from fifty tons of sun-dried beets shipped by Mr. A. Nadeau from this city. Mr. Nadeau will make an exhibit of the sugar-beets, green and dried, and the sugar made from the dried beets, at the Horticultural Fair.

On Monday noon, the 18th inst., the doors of the Horticultural Fair will be thrown open to the public. The Exposition, at this writing, is an assured success; the exhibit of the horticultural and agricultural products of Southern California will undoubtedly be the largest and finest ever before made in this part of the State, if not on the Pacific Coast.

The citizens of Southern California owe it to themselves, as a matter of pride, to bring in their fruit, and help swell the quantity, and increase the attractiveness. The number of distinguished citizens who have assured us of their intention to be present at our fair, makes it the duty of every citizen to put their shoulder to the wheel, and help on with the good work. Bring in your fruits, vegetables, and flowers, cheese and butter, wheat, barley, and corn, olives, figs, and nuts, everything that the ground brings forth, everything that the hands make, and let us show to the world what we can do, what we are doing, and by our prosperity invite the enterprising emigrant who is willing to work to come, and grow oranges, grapes, and fruits alongside of us, as good neighbors.

The attendance promises to be very large at the Fair, and it is to be hoped that the exhibits will be what they should, showing to the world what we can grow. The report of what we are producing, its quality, etc., will go out to the world, and by it many will come and make their homes among us.

Rich prospects for gold and silver are found within a hundred miles of Los Angeles, and experts say it will not be long until the excitement will be great.

The Arizona mineral exhibit of Messrs. Peel and Kimball, now being put in place in the Horticultural Pavilion, is said to be the finest collection of the kind ever made in the United States. It will attract the attention of thousands who have a longing for the mining business.

LOS ANGELES.

That a very marked change is taking place for the better in Los Angeles no observant person can doubt. In the first place, there are very few houses to let in this city at present. An application to any real estate agent will establish this fact to the satisfaction of any one. The Gas Company is another very good source to seek for information. They are laying service pipes every day. In addition, the feeling amongst our business people is very much more buoyant than it has been for years. Our merchants have this fall, with scarcely an exception, supplied themselves with unusually heavy stocks of goods. They very correctly realize that the area of Los Angeles trade has not only been extended, but that abundant crops have placed it in the power of our own people to buy much more largely than usual. They know, also, that the completion of the Southern Pacific Railway to a junction with the Atchison, Topeka & Santa Fe Railway, piercing out, as it will, a transcontinental line below the snow-belt, will give Los Angeles a very large and constantly renewed transient population. The steady market afforded to our producers by Arizona is also a dominant feature in the counting up of our sources of immediate prosperity; nor should it be overlooked that successful adventurers in our neighboring territory will, in very great numbers, make their future homes here. Everything thus has a very inspiriting outlook, to say nothing of the vineyard revival, or of the fact that the wheat fields of this county are now as reliable as our orange groves. The completion of the harvest will pour into the city thousands who have filled their purses by honest labor, and no merchant who has sense enough to advertise need despair of doing a thriving business from this time forward.—*Los Angeles Herald.*

Postmaster DUSKELBERRY informs us that the business of the Los Angeles post-office for the past six months netted $1,934 in excess of the same period in 1879; and for the quarter which ended September 30, 1880, a larger amount of business was done than has ever been transacted in any other quarter by this office. This exhibit, it must be remembered, is for the portion of the year which always affords the least business. The present quarter will show a still larger increase in business, and consequent returns. The business of the post office is a fair criterion of the business of the community, and by this test we are enabled to come to the unequivocal conclusion that the general prosperity of our city is increasing at a very satisfactory rate.—*Express.*

The following are figures in round numbers, in millions, representing the annual production of gold in the United States: In 1853, 54,000,000 dollars; 1857, 48,000,000; 1861, 38,000,000; 1871, 52,000,000; 1869, 48,000,000; 1872, 31,000,000; 1876, 32,000,000; 1878, 50,000,000; 1879, 38,000,000.

We will answer all communications addressed to us in reference to California through this column. We will answer regular subscribers by personal letter, when stamps are inclosed for postage.

To answer nearly two hundred inquiries about Southern California we are compelled, for want of space, to refer each correspondent to the general articles in the papers we have mailed them for answers to their questions. It would take several pages of our space to answer each individual.

To the numerous inquiries about our climate we refer to the able and reliable article by Dr. Gregg, in this number, on "The Climate of San Diego County."

To others who ask when will the "Southern route" be open for travel, we answer: from the best information we can gain from reliable sources, our Eastern friends can dine at home on Christmas, whilst the merry jingle of the sleigh bells rings out on the frosty air, and by taking the cars in the evening, can reach Los Angeles on New Year's day and join us in gathering the golden oranges, to satisfy the palate, and bright, beautiful flowers to adorn the table for a New Year's dinner.

The trip can be made below the snow line in comfort; a Pullman palace car leaving Chicago, St. Louis, or Kansas City, will come through direct to Los Angeles.

All hail to the energy and pluck of the men who furnish us this new transcontinental route.

NEW CROPS AND NEW INDUSTRIES.

In a new country, where the people are not yet masters of all the branches of industry which bring wealth and employment, new industries are continually suggesting themselves, many of which may easily be adopted and established. In flax-growing the fiber has, as yet, but little value, and there are no linen manufactories in the United States. The silk worm is also not yet acclimated here. The great source of profit in beet, sorghum and corn sugar is but just beginning to be known. The alpaca wool and Angora hair product are yet small in America, as are the jute and ramie products. The cultivation of tea and coffee and many other semi-tropical products have a great future. Add to these the thousand of little industries which each locality may have for using up raw materials and working them to the highest values, and but a small part of the possible production of the country yet exists.—*Rural New Yorker.*

One Western speculators in mines are just now having a rough time of it. The assessments come thick and fast. The mines of Nevada require $665,000; California, $350,000; Utah, $80,000; total, $2,000,000 in round numbers.

Our Table.

For want of space we must forego the pleasure of a review of books, magazines, and literary papers, and exchanges, that have been piled upon our table this month. Our attention is called more forcibly to the luxuries of the fruits, honey, etc., that our friends have so kindly placed us under obligations for.

From the Duarte we have grapes and figs from Mr. L. Barnes, from whose place the premium oranges were presented at this office. The grapes and figs are as fine.

From Pasadena, Dr. Conyer, Mr. Carr, and others, place us under renewed obligations for fruits that are fit to place on a banquet-table before the gods.

J. F. Dunsmore has our thanks for extracted honey, the finest we ever saw, the most delicious we ever tasted. A sample of which we sent east was pronounced by experts finer than any ever before sampled by them.

To L. S. Butler for comb honey, pure in color, flavor, and sweetness, we are under obligations, and we must say, if any of our apiarists expect to carry off the premium over such honey at the fair, they must whisper to their swarms of Italians to get up early to gather honey-dew, and to gather only from the choicest flowers.

On behalf of the Horticultural Society, we thank the farmers who have responded so promptly with samples of all kinds of grain for exhibition at the coming fair. We call our readers' attention to the display of grains in the stalk, and ask one and all if any country under the sun can excel the quality?

By a number of friends we have been presented with remarkable specimens of fine peaches, apples, figs, plums, pears, etc. We wish we could place a fruit-dish of such on the table of every Eastern family as an emigrant agent for Southern California; soon would our vacant lands be teeming with thousands.

FOR CALIFORNIA.

Mr. N. C. Carter has arranged for another party westward, to leave Boston, Mass., Nov. 10, 1880. Tickets to Los Angeles, $80. For full particulars address Mr. Charles Smith, Ludwrotre, Mass., who has charge of the party. Mr. Smith has made several trips across the continent, and will make a good pilot for the party.

The tree-keepers' convention, to be held in Los Angeles on the twentieth and twenty-first of October, will be attended by apiarists from all parts of the State, and much good will undoubtedly accrue from the interchange of views and opinions which will follow the meeting of so many apiarists.

Walk through some of the dirty scums of the great metropolis and you can realize the force of the words, "The man who mines here leaves soap behind."—*Hubbell Times.*

Climate.

War Department—Signal Service U. S. Army. Local Observations. Los Angeles, Cal., Sept. 1880

Highest Barometer, 30.059; date, Sept. 29.
Lowest Barometer, 29.724; date, Sept. 12.
Monthly range of Barometer, 0.265.
Highest Temperature, 91.0, Sept. 27.
Lowest Temperature, 44.0, Sept. 23.
Monthly range of Temperature, 47.0.
Greatest daily range of Temperature, 30.0 deg.
Lowest daily range of Temperature, 15 deg.
Mean of Maximum Temperatures, 77.0 deg.
Mean of Minimum Temperatures, 55.0 deg.
Mean daily range of Temperature, 22.0 deg.
Total rainfall or melted snow, none.
Prevailing wind, S W.
Total movement of wind, 2,621
Maximum velocity of wind and direction, 14 miles W; date, Sept. 6.
Number of fog days, 1.
Number of cloudy days on which no rain fell, 2.

A CONCESSION TO CALIFORNIA.

The telegraph gives a synopsis of the views of the New York *Herald* touching the effect of the failure of the shortage of French and Rhine wines this year on the demand for California wines. If there were no deficiency in France there would be a demand for all California wines this year at fair rates. No doubt, the price will be somewhat higher because of the lessened competition between the cheaper sorts of foreign wines and the cheaper and better kinds produced in California. It has long been known that the wines produced in this State were used to some extent by foreign houses in mixing with imported wines. That is rather a speaking sort of compliment, but it is still a concession to the value of home production. There are half a dozen sorts of cheap and pure wines now produced in this State which are practically beyond competition—that is, the demand at home is sufficient to establish good paying rates. This demand will increase every year. But the fact still remains that California is producing wines on a very small scale.

What are the ten or twelve million gallons which California may produce this year compared to the immense wine product of the world? When this State produces, say two hundred million gallons, its wine product will have some influence on the great markets of the world. At present, California can only supply a small part of the local demand. The cheap white wines are better than the cheap Rhine wines, and the claret made of Reisling grapes is better than the average claret of foreign importation. As for the port wine, about the only pure wine of this grade which satisfies the judgment of medical men is that which is produced in this State. The statements of the *Herald* are only cumulative evidence of the standing of the cheap and pure wines produced here. The same testimony in kind comes from many other sources. In a general way, it may be said that the tide has turned, and that the flood tide will be stronger every year. It is not now so much a question as to the quality of the wines, as to how the increasing demand is to be supplied.

Horticulture.

SOIL CULTIVATION

FROM A PRACTICAL AND SCIENTIFIC STANDPOINT.

By O. H. Condra.

Editors Semi-Tropic: The mooted question of deep plowing versus thorough cultivation has not, perhaps, received so general attention, by the tillers of the soil, as its merits deserve.

Turning up to the surface the rich subsoils of impoverished grain lands, is unquestionably of great benefit to the anticipated crops, but not with a corresponding assurance can we assume that equal benefit may accrue, or that it is even a necessity under any circumstances, to the orchard grounds. It can not well be denied, that the former is yearly becoming exhausted, while, on the contrary, the latter is annually receiving the benefit of falling leaves and other accumulations of waste about the trees, that is gradually being transformed into plant-food, and, moreover, is but slightly taxed for the support of the tree, comparatively speaking; hence we need be but little concerned about the immediate exhaustion of this surface soil, if not too early washed away by excessive irrigation. But Mr. Charles Coleman, jr., of Pomona, in referring to my article on deep plowing, etc., in the June number, holds to somewhat different views, and advances the idea that deep plowing is a necessity, for two important reasons, viz., First, to enable him to tear away all of the surface roots to within ten or twelve inches of the surface; and, secondly, that the soil may be able better to retain moisture.

He says: "My aim is not to allow a root to grow within ten or twelve inches of the surface. Pray, of what permanent good are they to the tree?" And nowhere does he tell us the age of his tree or the character of the soil in which they are growing, two essential factors to be taken into account. We all know that the young orange tree will manifest wonderful vigor in rich soils, for a few years almost oblivious of the common abuse of root and top pruning. But it is in its adult age that we are to anticipate the great damage of so unnatural a treatment, more than will be observed at present. Contrary to the fair common idea, a plant or tree should be regarded as an individual, demanding certain natural conditions for supplying itself with appropriate food, and for purposes of assimilation; instead of a thing in nature to be molded at will into whatever caprice in folly may suggest.

So where, in sparsely timbered localities, do we find the giant oak or the slender pine wanting in a complete net-work of both large and small surface roots. They have an important function to perform, not only as food-gatherers, but as mechanical supports to the tree. Who has not observed the habit of the poison ivy, the trumpet creeper, and even the aerial roots of the common corn stalk, emitted from the stem several inches above the surface, and descending and taking a firm hold upon the soil? We can also mention, as perhaps a more striking illustration of this subject, the habit of the *Pandanus* or screw-pine, often cultivated in conservatories, its appearance being as though partially raised out of the ground, from its habit of emitting strong roots in the open air from the lower part of the trunk, and descending to the soil. And very similar is also the economy of the *Rhizophora mangle* or mangrove tree, the famous banyan tree of India; and almost countless others might be mentioned, if necessary to establish this natural tendency in tree habit. All surface roots are as much mediums for circulating the sap of the tree as the still more exposed trunk and leaves, and besides should be retained as mechanical supports to the tree, if denied all other functions. It might be regarded almost as reasonable to dissect away the little ribs or veins ramifying the tiny leaf, essentially the support to its delicate cellular tissue, as their counterpart, the great surface-root frame-work and mechanical braces of the stem and bole. From a physiological standpoint also, both must be regarded as indispensable to the vital economy of the tree.

We are led to infer from the well settled conclusions of accepted authorities, that the entire external surface of the plant or tree, from the topmost leaf to the lash descending spongiole, is susceptible of performing a multitude of functions. That the descending radical has its primary and secondary duties to discharge, running away from the light, extreme heat, or cold, as may be, so to speak, while the laterals, putting out from the very surface of the ground, and at intervals in its downward course, seek other conditions to meet the ever-growing demand of the more beautiful and crowning portion above the surface. Can it be possible that the tree requires no other support than the slender and spongy roots a foot or more beneath the surface, during a gale of wind? I believe the tree is the better judge of these things, which must be admitted we are incapable of successfully contravening. The question of greater liability to disease, which may, in time, follow this treatment, might be discussed; for it is hardly to be expected that roots will not continually sprout from the underground portion of the trunk, similar to a cutting. Many very promising orange trees are grown from cuttings, as we all know.

As to the advantage of deep plowing for the purpose of retaining moisture, either artificially applied, or brought to the surface by capillary attraction, I must also disagree with Mr. Coleman to a certain extent. However, character of soil might render it hazardous in making an unqualified statement. A loose, sandy, gravelly soil may be considered as already too porous to retain water very near the surface any length of time; hence deep plowing in such a soil would seem useless for that purpose alone. But here let me refer the reader to Prof. James F. W. Johnston, a standard authority on agricultural chemistry and kindred sciences. He says: When a portion of soil is dried carefully over boiling water, or in an oven, and is then spread out upon a sheet of paper in the open air, it will gradually drink in watery vapor from the atmosphere, and will thus increase in weight. In hot climates and in dry seasons, this property is of great importance, restoring as it does *to the thirsty soil*, and bringing within the reach of plants, a portion of the moisture which during the day they had so copiously exhaled.

Different soils possess this property in unequal degrees. During a night of twelve hours, and when the air is moist, according to Schubler, one thousand pounds of a very fertile soil will gain about eighteen pounds of water. Fertile soils, therefore, possess this property in a very considerable degree. This, he further says, affords one means of judging of their relative agricultural capabilities. Again, he says, in further illustration of the unequal powers possessed by the different soils to absorb and retain water, that from one hundred and six pounds of dry soil, water will begin to drop, if it be a quartz sand, when it has absorbed 25 pounds; calcareous sand, 29 pounds; loamy soil, 40 pounds, clay loam, 50 pounds; pure clay, 70.

But a dry, peaty soil will absorb a very much larger proportion before it suffers any to escape. The more water the soil contains within its pores, the more it has to part with by subsequent evaporation; and, therefore, the *colder* it is likely to be. The presence of this water also excludes the air in a great degree, so that for these as well as for other reasons, it is desirable to afford every facility for the speedy removal of the excess of water from such soils as absorb it, and are capable of containing it in a very large proportion. Generally speaking, those soils which are capable of arresting and containing the largest portion of the rain that falls, retain it also with the greatest obstinacy, and take the longest time to dry. Thus a sand will become as dry in one hour as a pure clay in three, or a piece of peat in four hours. This, therefore, not only explains and shows the correctness of the well-known distinctions of *warm* and *cold* soils, but exhibits another strong argument in favor of a perfect drainage of stiff soils and of such as contain a large proportion of decaying matter.

To illustrate the power of capillary attraction, pour water into the sole of a flower-pot, the soil gradually sucks it in and becomes moist, even to the surface. And so with the water contained in the subsoil of the fields; it is drawn up to the surface by the same power, but when present in excess, this capillary action, as it is called, keeps the soil always moist and cold. Not only are these wet soils cold, but while in that condition they are incapable of absorbing the oxygen, nitrogen, carbonic acid, and other essential elements that the tree constantly requires, and which to a certain extent are known to be taken up by the roots. From these and many other equally important considera-

tions, that space excludes from this article, it may not seem inappropriate to make suggestions and deductions from observations and experiments touching upon unnatural practices, that have already resulted in disease and death to almost countless numbers of the older orange trees of this county, and that must prove equally prophetic of the future to the young groves now so promising throughout this fair land, if persisted in.

The subjects of irrigation and non-irrigation, the plowing away of all the aerial or surface roots that can be reached by extra efforts with the plow, or even ordinarily, can not well be too fully discussed. That we are unable to discover the processes by which these surface roots perform all of their functions while imbedded in what we choose to term dry soil, must not be taken as evidence that they are useless appendages, and hence must be ruthlessly torn away. If a pound of the driest soil, about the roots of an orange or any other tree, be taken before sunrise, and *carefully* weighed by sensitive balances, and then exposed to 212° Fahr. in a common stove oven for an hour, then reweighed as carefully, the loss in weight will greatly surprise the most skeptical experimenter, the difference between the two weights expressing approximately the amount of water contained in the sample. Hence it may safely be asserted that the driest soils of our mesas west of the coast range, throughout the orange belt of our counties, will be found moist to an appreciable degree during the entire period of our dry season.

Hence again, in view of certain facts quite recently established by carefully conducted experiments, pertaining directly to this important subject of irrigation, particularly, are the new comers, engaged in the citrus culture, justified in following in the wake of the pioneers, those, even, whom the public deign to honor as authorities, without credentials? Lamentations come up from those old orchards, and serious doubts are freely expressed, in discussing their present outlook for long life and profitable returns. Accepting these as admonitions from our peers on this trial, does the introduction of wholesome innovations, suggested by repeated experiments and close observation, as well as supported by all of the known laws governing plant life, render our prospects, two decades hence, more hopeless than the present treatment of the orange groves has demonstrated during the past two decades? Disease *has* already overtaken these groves in their youth, and why pursue the same course that foreshadows disaster and inevitable ruin? If the age of the orange tree is estimated by centuries, what encouragement is presented by hopelessly diseased trees at twenty or twenty-five years of age?

It is in view of the above and many other considerations, that we hesitate to accept without questioning the present artificial and seemingly unnatural methods in vogue of treating the orange trees, especially in Southern California. As a result of this growing antagonism and investigation, already may be observed a far greater degree of caution exercised in the use of water for irrigating purposes, unless rendered necessary by clay, cement, or other impervious sub-strata, interposing an insurmountable barrier to capillary action, than formerly. In this locality, the results are most gratifying. The average growth of our non-irrigated trees (and there are several groves this year) far surpasses most of those irrigated but once, and surprisingly so, those receiving even the modified treatment of two or three cold drenches. Demonstrable facts should be preferred to theories, and whatever course pursued to obtain such data as facts afford will challenge attention, and should the present investigation of the uses of water for irrigating purposes as heretofore practiced, show that unwarranted abuses exist, and greatly to the detriment of horticultural and other interests throughout this region of the country, I believe not only a thorough investigation is demanded, but also practices adopted tending to correct such abuses. Such, in my opinion, the public are ready to accept, as soon as their more critical attention is called to this great question. We may expect opposition, but I believe only from land and water monopolies conjoined, whose interests may lead them to disregard the wholesome laws of nature, in carrying forward their schemes. Again, upon the other hand, peculiarly situated arid lands can not be presumed, without trial, to respond remuneratively to the mode of procedure above briefly indicated. The last suggestion is intended to apply more particularly to the country east of the coast range of mountains.

Working with the laws of nature around us, instead of against them, should be the daily and constant study of the horticulturist. Subverting the natural order of things will not conduce to success; this we all admit; but the question is, What *is* the "natural order of things?" To answer this properly, a consideration of the capabilities of the soil to withstand drouth, would be one important factor. Mean and maximum temperatures, maximum rainfall during a series of years, humidity of atmosphere, *deep* plowing at first, and the *entire* absence of weeds from the first also, together with a mode of surface cultivation among the trees that will not disturb their roots, nor permit the surface to become hard and unyielding, always to be kept in a finely pulverized state, constitute the principal points for the thoughtful person to consider, in an attempt to work under a natural order of things. We must take it for granted, when observing the natural vegetation around us, that there exists a certain understanding—a harmony—between the clouds, our subterranean reservoirs, capillary attraction, so called, and the soils; an adjustment of former antagonism, if any, must have been established, and experiments already conclusively attest the fact, that a degree of confidence can be placed in their united ability to insure success that has hitherto been almost entirely ignored.

The tree or plant, therefore, consigned to their joint care and protection, supplemented, may be, under certain circumstances with a little water, as an auxiliary properly applied, affords, apparently, a more satisfactory assurance of a profitable existence, health, and long life, than by following out the logic of events, as results show by the old methods.

Pasadena, Oct. 2, 1889.

SMALL CREAM CHEESES.

A sheep-farmer's wife may make some delicious cream cheeses in the following manner;

Procure some molds made of blocks of maple or beech six inches long, three inches wide and three inches deep, inside measurement. I have made these of a piece of plank, which can easily be procured of any wagonmaker or country sawmill. The plank is three inches thick, and two inches longer and wider than the inside of the mold; the mold is easily bored and chiseled out. One is enough if the cheese is for home use, as this is to be eaten fresh, and will not keep. Mats of common green rushes are sewed together to fit into the mold. Sweet cream as thick as can be procured is the material of which the cheese is made. The mold is laid upon a dish; a rush mat is placed at the bottom of the mold; this is covered with a piece of fine muslin rinsed in brine. The cream is put into the mold and a piece of muslin dipped in brine is laid upon it; then a rush mat is laid upon the cloth, and a small block is laid upon the mat. This is pressure enough. The dish and all are set away in a cool place for two or three days, when it will have become compact, slightly acid, and of a cheesy flavor. It is then ready for use, and is eaten as a relish for dessert or lunch.

When a taste has been acquired for this kind of cheese they are considered a delicacy. I have not seen them for sale in a fresh condition in this country, even in the New York markets, but have seen them in the London and Paris and other French markets, where they are very popular. I have frequently made them for my own use, and have them at short intervals continually, and can recommend them to every family where the cream can be procured. No salt is used in making them; that is eaten with them as may be desired. They will not keep, and in that respect are of a similar character to the unwashed, fresh, and unsalted butter, which is so highly estimated by many persons.—*H. S. in Country Gentleman.*

There is more activity in Wilmington harbor than in any other on this coast outside of San Francisco. From one to four coal ships are constantly unloading or taking on cargo there, and the whole inside harbor presents a scene of bustle and activity such as is not seen outside of the great commercial harbors of the world! Not less than one thousand men are engaged, directly or indirectly, in the shipping and in moving cargo in and out of the harbor.—*Los Angeles Express.*

THERE are 86,497 miles of railroad in operation in the United States.

THERE was 4,721 miles constructed in 1879, and it is believed that 1880 will go a few miles better.

THE gross earnings of 81,233 miles, in 1879 amounted to the enormous figures of $529,012,999; the *net* earnings amounting to $219,916,724.

IN 1871, only eight years before, the number of miles in operation was 44,617; the *net* earnings $141,746,404—showing a gain of $78,170,320.

ON the Pacific railroads the earnings aggregated $30,354,241 in 1878; the *net* earnings were $16,489,425.

THE Atchison, Topeka & Santa Fe and Southern Pacific railroads will connect about the first of January. Through sleeping cars will run from Kansas city to Los Angeles.

LOS ANGELES is the railroad center of the Pacific coast.

SAN DIEGO is to be one of the terminus points of the Santa Fe railroad.

WHEAT.

From Rural New Yorker.

It certainly is of great importance to farmers to know the "bottom" facts of raising good crops of wheat—good in quality and quantity. If my experiments this season will be of any value to the many readers of the *Rural*, they may have them so far as the results have yet been ascertained: In 34 rows 100 feet long, and about one and two feet apart, on a plot of ground six rods long, by three rods, I sowed 34 varieties of spring wheat, one ounce only in each row. Half an ounce of each kind I wet with sulphate of copper; the other half I sowed dry; three of the 34 smutted wet and dry; 11 smutted dry, but not wet, and 20 did not smut at all.

I cut low with a sickle, and weighed the straw, which came to 240 pounds, grain 262½ pounds; all without any fertilizer and on poor soil. The largest yield produced was 10 pounds of Rio Grande from one ounce sowed, or 160 from one. The smallest yield was Sonora, 56 from one.

So far as thick and thin sowing go, the result is in favor of the latter. In four rows, 720 feet long, I sowed one pound of seed, and in five rows of the same length, right beside the other, I sowed nine pounds of the same seed. The four rows yielded the most. Of the 70 varieties I now have on exhibition—all of which I raised on these grounds—the most prolific and attractive are the Rio Grande, Australian, Black Centennial, Clawson. Of my hybrids, Nos. 10, 13, 16, 18, 19, and 21, 18 is by far the finest of any; No. 10 is next. These results are the croppings of quite poor soil, without a shovelful of manure or a pound of any commercial fertilizer.

My hybrids are not yet named. When they become fixed in color, etc., I shall give them a name. A. E. BLOUNT.

HORTICULTURAL FAIR.

Horticultural pavilion is being put in fine condition for the coming fair.

Nearly all the available space for exhibition purposes has been taken, and every indication given of one of the finest exhibits ever made in the State.

Every county and almost every locality will be represented, by their products, in friendly competition and comparison, resulting in great good to exhibitors and visitors who are interested in horticulture.

Our Fair will be honored by the presence of President Hayes; W. T. Sherman, general of the army; Hon. Wm. Ramsey, secretary of war; Hon. Wm. G. Le Duc, commissioner of agriculture, and many other distinguished citizens. Southern California should do herself honor by making a display of her products worthy this distinguished visitation.

The corps of newspaper correspondents who will send over the wires to their thousands of readers in the East what they see here, will be worth thousands of dollars, if valued in dollars and cents, to fruitful Southern California. Will we do our duty? Will you, reader, do what you can towards properly representing to the world what we can grow?

SHERMAN, HYDE & CO.

The Largest and Richest

MUSIC HOUSE

On the Coast,

Will this Year Exhibit a Large Stock of

Pianos and Organs

AT THE

FAIR IN LOS ANGELES.

These Pianos will be sold at Wholesale and on **$10 Monthly Instalments.** Those who intend to buy Musical Instruments should now go to the Fair and examine them.

Mr. F. R. Girard,

Their Manager, will be here himself.

Illustrations.

TEMPLE BLOCK.

This magnificent building, shown in the engraving on this page is located in the center of our beautiful city. The block is of beautiful architectural proportions and substantial, and would be a credit to any city of our country. The block is the property of Messrs. H. Newmark & Co., our enterprising wholesale grocers, on Los Angeles street. These gentlemen prove their faith in Southern California and her metropolis by investing money in such buildings, by conducting a large business, that is hardly excelled by that of any firm in San Francisco, and certainly not by any firm outside on this coast.

The block will show to our Eastern readers what we could not describe with a pen, that we have a wide-awake, enterprising people, and that this is a good country for more of the same kind. Temple Block has fifty business firms under its roof. The room corner of Main, Spring, and Temple streets is occupied by the

LOS ANGELES COUNTY BANK.

This bank was organized, like nearly all the banks in California, under the State law, in July, 1874, with a paid-up capital of $300,000, gold coin.

Under the State law a bank with $300,000 paid-up capital can do both a savings and commercial business, and the bank was organized as both a savings and commercial bank, and the savings department furnished a safe and profitable depository for men of small means. Owing to the restrictions by the late Legislature placed upon savings banks, and the capital of the bank being ample, in January, 1880, the bank determined to discontinue the savings department, and conduct simply a commercial business, and has paid off its savings depositors, and is now a bank of deposits and discount.

Its stock is held by substantial business men of Los Angeles and San Francisco. This bank, through all the fluctuations and excitement, has maintained a steady and substantial business, and the full confidence of its clients and the community. Mr. J. S. Slauson, the president, is known in financial circles as one of the most careful banking men of the country, and is recognized as an authority on financial questions of the day. The county bank will always take high rank as a safe institution under his management. Mr. J. M. Elliott, the cashier, is a thorough banking man and ably conducts his department of the bank. R. S. Baker, the proprietor of Baker block and other fine property and ranchos, is the vice-president. The directors, Messrs. J. S. Slauson, A. W. Bowman, V. A. Hoover, Robert S. Baker, J. Bixby, Geo. W. Prescott, and E. M. Widney, are all well known business men and capitalists.

H. M. MITCHELL, ATTORNEY AT LAW, ROOMS 76 AND 78, TEMPLE BLOCK.

Mr. Mitchell has been a resident of Los

Angeles thirteen years, and has occupied several positions of trust and responsibility; acting as public administrator in 1872, during which year he was admitted to practice at the bar. He resigned his position of public administrator and was appointed under-sheriff during Wm. Boland's administration, and assisted in the capture of Vasquez, a notorious bandit, the boldness of whose depredations was a terror throughout several counties, and whose execution broke up the band of outlaws who sought more congenial fields for operations, since which time quiet has prevailed and travelers may go unmolested. He was also under-sheriff with Don Alexander six months, when he resigned the position and was nominated sheriff and elected by over one thousand majority, and after serving the people as sheriff during the term withdrew from public life and returned to his first love.

V. P. RAMIREZ, ATTORNEY AT LAW, 72 TEMPLE BLOCK.

Mr. Ramirez is a native Californian, speaks the English language fluently, and is conversant with the old Spanish laws and customs that governed Los Angeles when a pueblo under Spanish rule. Mr. Ramirez is a nominee for the State Assembly on the Republican ticket, and from his known popularity and extensive acquaintance bids fair to be elected, and no doubt but what the people will find in him an earnest and honest advocate to represent them in the halls of the Assembly of the State.

M. KREMER, NO. 4 TEMPLE BLOCK, INSURANCE AGENT.

Represents companies whose combined capital aggregates $140,000,000. Mr. Kremer is an old resident of Los Angeles, and the marks of favor bestowed upon him by the people of this county and city speak volumes for his known integrity and business qualifications, having held the position of county treasurer from 1859 to 1865, was then elected supervisor, which office he held from 1865 to 1867. He occupied the position of city clerk for six consecutive years, was a member of the board of education nine years, was elected county tax collector, which position he held four years, and now occupies the position of city tax collector which expires on the first of January, 1881—when he is no longer an aspirant for public favor, but intends to devote all his time to the insurance business.

GLASSELL & SMITH

Occupy a suite of rooms in the south-west corner of the block. These gentlemen are recognized as among the foremost that practice before the bar on the Pacific Coast. Mr. Andrew Glassell is a polished scholar and gentleman, devoting his time and energies in his chosen profession of the law. He has never allowed himself to be drawn into politics, but has always kept attentively at work for his large list of clients. Mr. Glassell came to California from Alabama, in 1851, where he practiced law until 1865, when he came to this city.

In addition to the never-ending work he gives to the interests of his clients, Mr. Glassell has always found time to help on in any and every laudable public enterprise. The Semi-Tropic has received substantial aid from him, in helping to circulate thousands of papers in the East, to induce people in want of homes to come and settle with us.

Mr. George H. Smith, the junior member of the firm, is also recognized as one of the bright lights before the bar. Mr. Smith has been actively engaged in the law since 1857. He is reporter of the new Supreme Court of this district; has served acceptably to his constituents in the State Senate from this district. We commend the firm to any who have business in law.

TEMPLE BLOCK, LOS ANGELES, CALIFORNIA.

Viticulture.

WINE-MAKING.

By J. Demiller.

The science of wine-making and treatment is now considered an important industry in our State, and I will, at the request of some friends, say a few words about it. The room for wine-making, pressing, and fermenting should be according to want, comfortably large, airy, light, dry, and warm. It is absolutely necessary to have all vessels and utensils, before and after using, in the cleanest and neatest condition. It is just here where a great many of our new and inexperienced wine-makers are at fault.

A very important point is that the first fermentation be thorough. In order to accomplish this, it is necessary to assort grapes more or less, as much as possible; that is, to separate all bad material, such as unripe, rotten, etc., before going to the press.

To insure a thorough fermentation, an even, warm temperature in the room or shed used is required. Cold night air often checks the working, especially in too large vessels. Vessels holding 160 gallons or less are large enough for this purpose.

California wines have, in my own experience, been often refused in the Eastern markets, because they contain, as those people claim, a ground taste. This is, however, a mistake, to a great extent. This ground taste (as Eastern wine men call it) is a bad taste, nevertheless, and is most always caused by mold contracted on and in vessels that come in contact with wine or the juice of the grape. Bad treatment, or sour and moldy vessels, will very often deteriorate the juice to such an extent as to be only fit for distilling purposes, to the great loss of the producer, who could, with more care, have had a good article of wine, and at the same time help the industry, and not injure the reputation of our wines, as well as his own interest. A great deal of wine made in this State, of our delicious grapes, has been shipped to our principal markets that was not fit for drink. There is no reason why any of our wines should not be good if properly handled.

I claim that all grapes so far cultivated in our State, to my knowledge, will make a good marketable wine. Of course some varieties are better than others. Our Mission vine will produce excellent sweet wines, as well as good brandy, and a marketable dry wine. For the latter purpose, there can be no question that the foreign grapes, to a large extent cultivated now in this State, such as Riesling, Berger, Zinfandel, etc., are far superior. It has often been said that our wines must have more age. This is very true, but we can never expect the producer to hold his stock any longer than from one season to the next. To improve wine by age and get it ready for market is the part of the dealer. After the juice of the grape has passed through the first stages of fermentation, it should be drawn in clean casks, which must be free from all mold or acid. Ordinarily, if well soaked and washed with clean, fresh water, and drained until nearly dry, when a small piece of sulphur is burned in the cask, it is ready to fill. Should the cask be anyway sour or moldy, great care must be taken to cure it before it can be used. The best remedy I know is to use unslaked lime and water. Lime will concentrate all acid and destroy all fungus. If any particle of lime adheres to the cask after washing, it will never cause any injury to the wine. Every wine-maker should have, and can not get along well without, a small boiler of some kind to steam empty casks that are not in the very best order. I presume the process is known to all. Casks should be placed on skids in an exact level position, so as to fill up to the bung. Bung-holes must be exactly round, with well-fitting bungs firmly inserted, so as to exclude all air. The cask must be as full as possible without running over. Wine in the new state (the first year) wants filling at least once a week, and the bungs washed and well dried before replacing.

The first and second year it should be drawn (racked) off in January, May, and September, and again the next January. Care must be taken not to get any of the sediment in with the clear wine. By the foregoing I am trying to show that cleanliness is a principal point in wine-making, but it must be thorough.

SUMMER PRUNING OF GRAPES.

At the last meeting of the St. Helena Vinicultural Association, the Committee on Summer Pruning and Suckering reported as follows: We have made a careful investigation of a number of vineyards where no tip suckering had been done, and found the shoots or canes grown together in a thick, tangled manner, with the grapes in almost inextricable confusion; the canes long, spindling, and affording but poor and indifferent spurs for the next year's crop.

Had the shoots been thinned out at the proper time, the remaining ones would have grown larger, the fruit been more perfect, the weight fully as great if not greater, and the vines in a much better condition for next year's fruiting.

We also considered the matter of summer pruning or topping, and feel satisfied, from close investigation, that when vines are allowed to run without shortening in, they first shoot up; then, as they become heavy and nothing to support them, they fall to the ground and trail along, in some cases, through other vines, not infrequently to a distance of from fifteen to twenty feet, leaving the main stock, where the best grapes are closely packed, exposed to the rays of the sun, to be scorched and more or less injured every year; whereas, had the vines been shortened in early in the spring, lateral shoots would have sprung from the cane, strong, healthy foliage, in the shape of a dome, would have sheltered the grapes, and the result a full and superior crop. We therefore recommend, first, suckering or thinning out extra shoots when the growth attains from twelve to fifteen inches, especially among "Black Malvoisie" and "Chasselas Fontainebleau." Summer topping, when the new shoots attain about thirty inches, being careful to cut as little as possible, one bud being sufficient to stop canes from running.

As all shoots do not grow uniformly, it will be found necessary to renew the operation one week later, when backward shoots will have attained the requisite length to be topped.

This last operation being performed, no more pruning should be done during the summer except in cases of unusual growth.

The above report was thought to be an excellent one, and was received by the meeting.

Lewelling added, as an additional safeguard in topping: "To cut off the branch five leaves from the last bunch and no less." This followed, there is no danger of cutting too much.

KEEPING GRAPES.

We hope many of our readers will undertake the keeping of grapes for winter use, and report to us their success.

It is well for those who are packing grapes for winter, to keep in mind the essentials for success, and to vary the non-essentials according to circumstances. Standing first as indispensable, the fruit should be well grown and well ripened. The next requisite and indispensable, is to place the fruit in a *cool* dry room. The materials in which grapes are packed are of secondary importance. Baked sawdust is excellent, because, being a non-conductor of heat, it preserves a uniform temperature, and absorbing moisture, it keeps the fruit dry. Soft straw, chopped an inch long, is a good material to pack in, and is more easily freed from the berries. Cotton batting does well, if well dried.

Each bunch should be carefully handled, all imperfect or bruised berries should be removed, and the bunches spread out singly until they go through the sweat before packing.

SALAD DRESSING.

Take a tablespoonful of mustard, a saltspoon of salt, and same quantity of sugar, the yolks of two eggs boiled hard, rub these together on a plate with a knife till well incorporated, then *good* salad oil. (California olive oil—Ed. S. T.) put on a little at a time, and well rubbed in, say from one to two tablespoonfuls (taste decides; some like a decided oil taste, others do not). Then add vinegar enough to make it of the consistency of good rich cream. Now, is not this a little like the colored cook's recipe? Now, business. You just taste a little of this and a little of the other.—*Fruit Recorder.*

Now is the time to subscribe for *Semi-Tropic California*—only $1.50 per year.

Apiary Department.

CONDUCTED BY N. LEVERING.

TO THE HONEY BEE.

DEDICATED TO THE LOS ANGELES BEE-KEEPERS' ASSOCIATION.

Sweet toiler of a day!
Short is thy life, yet full of perfect bliss
To dream 'mid flowers, and with them pass away.
What sweeter life than this?

To live remote from strife,
To sip and swing where flowery tendrils twine
O, toiler sweet! I would that human life
Were even like to thine.

How sweet it were to sip
Bright nectar where a thousand toiler sighs,
Exhaled from many a coral-tinted lip,
Melt 'neath the azure skies!

When mantling night-shades go,
To hie away where lingering fairies haste;
When rosy day's deep flushing crimson glow
Flames the trembling East.

To rise with winding sweep;
To lay the course, as points the compass true,
Toward some far, flowery harbor, slumbering deep
'Neath the aerial blue.

To tireless wing away
Where spread the flowery leagues in odorous bloom,
And sonnous dream where loit'ring zephyrs play,
Till falls the twilight gloom.

What spirit-haunting dream,
What rapt soul-worship for thy motherqueen,
Impels thy sweet form course o'er plain and stream,
With snowy-flashing sheen?

Thy sweet lips fondly cling
Where bridal-blossoms deck the orange-tree,
And Nature whispers to the love-vanced Spring
Of golden days to be.

'Mid summers sweet turmoil,
How thy soul pass the fragrant, rosy hours?
And evanescent as the fading flowers,
Thy own brief life of toil.

What though the spoiler's hand
With ruthless greed absorbs thy golden store?
Soon hold thy wavering cells a hidden trust
More precious than before.

From the far, flowery dells
Thou hastest homeward on thy pinions fleet;
And, singing ever, build'st thy tiny cells,
To hold thy treasures sweet.

Sweet sybilic divine!
O, that the long, long changeful life of man,
Of bitter-sweet, were even like to thine—
A short, sweet life of sunshine, strewn with flowers!

ALBERT F. KINGSLEY.

Los Angeles, Sept., 1890.

PROFITS OF BEE-KEEPING.

When this branch of industry is practiced in a careful and intelligent manner, there is no ordinary business within the scope of my experience that remunerates as satisfactorily as bee-keeping. "Good luck" is good, intelligent management, and "bad luck" is the reverse. Many a person invests in a swarm of bees, expecting it to make his fortune. He is ignorant of their wants, neglects them, except to rob them of their honey, and perhaps destroy the queen. They dwindle and grow less, moth and robbers attack them, the colonies attack them, the colony disappears, and the unwise curses the business as a bad speculation. With proper care and intelligent management, one year with another, bees will average one hundred per cent, clear of expenses. The surplus honey will pay for the hives and care, and with ingenious finessing one may make from two to four and sometimes ten or a dozen colonies from one, it being strong and having a prolific queen.

Besides a fair increase of bees, instances are not rare when one hundred and man pounds of surplus honey per hive have been taken in a season from each colony. The business is easy and interesting, and may be performed by women, or even by children who have aptitude and taste for it.

An exchange says: To get figs from thistles, reduce one ton of thistles to seventy pounds of potash. Then sell your potash for cash. Then take the cash and buy figs.

NAUD'S WAREHOUSE.

Mr. E. Naud conceived the idea and necessity of building a commodious warehouse in this city, and our engraving shows the building as it now stands. The building is 200x200 feet and will be 200x300 as soon as the proposed addition is built. The foundations are solid, the floor is twelve inches cement and concrete, covered with two inches asphaltum, the ceiling twenty-two feet in the clear. The capacity now is over 200,000 sacks, which will be increased to nearly half a million when the addition is completed. The warehouse is conveniently located to both railroad and farms and the business part of the city. The conveniences for handling grain are unexcelled by any warehouse on this coast. Mr. Charles Henry, who has been in charge of the warehouse from the time it opened, over two years ago, informs us that he can receive and deliver 6,000 per day, and that he has delivered 38,000 sacks on the cars in six days. We

NAUD'S WAREHOUSE, LOS ANGELES, CAL.

doubt very much if there is another establishment that can do as much work and with such ease.

ADVANTAGE TO FARMERS.

A prominent farmer remarked to us that he profited very much from this warehouse, and he did not know what the farmers would do without it. Wheat is only worth 90 cents and barley 50 cents per cental. If the farmer was compelled to sell now, and if it was not for the storage privilege, where liberal cash advances are made, many farmers would be compelled to sell. But now he can store his crop, take his warehouse receipt, get what money his necessities demand, and sell his crop when prices are better, doing away with the expense of sheds and bins at home. Storage rates are $1 per ton six months on grain, and fifteen cents per bale on wool per month.

Mr. Naud has established a good business enterprise, and deserves the gratitude of the public as well as their patronage.

LEMONADE.

There are three ways of making lemonade: To squeeze the juice into cold water—this is the shortest way; or to cut in slices and soak in cold water; or to cut in slices and then boil it. Lemonade is one of the best and safest drinks for a person, whether in health or not. It is suitable to all stomach diseases; is excellent in sickness. The pipt, crushed, may be also mixed with water, and used as a drink. We advise every one to rub the gums daily with lemon juice, to keep them in health. The hands and nails are also kept clean, white and supple, by the use of lemon instead of soap. It also prevents chilblains. Lemon is used in intermittent fevers, mixed with strong, hot, black coffee, without sugar. Neuralgia may be cured by rubbing the parts afflicted with a cut lemon. It is suitable, also, to cure warts, and to destroy dandruff on the head by rubbing the roots of the hair with it.

Evaporated fruit is as superior to sun-dried fruit as fresh raspberries are to those dried on the bushes—to bad, pies and sauce made from evaporated fruit is equal to such made from fresh fruit from the trees and bushes.—*Fruit Recorder.*

Subscribe for *Semi-Tropic California*—only $1.50 per year.

THE CLIMATE OF SAN DIEGO.

By R. J. Greeg, M.D.

The following article is written for the purpose of conveying to those interested in climates a fair idea of the climate of San Diego. Some explanation of what, in the writer's opinion, constitutes a good climate, and of the nature and extent of the benefit that those in feeble health may reasonably expect to derive from climatic advantages, has seemed necessary. Policy, if no higher motive, suggests the propriety of avoiding everything that looks like exaggeration. A half-truth may do more harm than a dozen deliberate falsehoods. Extravagant hopes can only meet with disappointment; and it is cruel as well as impolitic to excite them. I have no hesitation in declaring my belief that the curative influence of mild climates has been much overestimated by some writers. Neither a mild climate nor anything else can be a substitute for a careful observance of physiological laws. Mildness of climate simply increases largely the patient's chances of reaping the reward due to strict obedience to those laws.

A residence in San Diego of twelve years will justify me in expressing an opinion about its climate; more especially since those years have been spent in the practice of medicine. If any one ever subjects a climate to severe tests it is the physician. Called out every day of the year, at all hours of the day and night, the doctor should be climate-wise, if any man is. Even should he be somewhat thick of skin, and but slightly sensitive to subtle changes in the weather, there are ever under his care those whose feelings are morbidly acute in detecting variations in the temperature, in the humidity, in the density, and in the electrical and chemical conditions of the atmosphere. The meteorologist can tell but part of the climatic story. The atmospheric taints, that cause the fatal pestilences that have again and again decimated the human race, have as yet eyer remained beyond the reach of instrumental detection. There prevail, at times, epidemics of catarrhal affections, such as are usually attributed to sudden or extreme changes of temperature, when the thermometer shows but little variation in the thermal conditions of the atmosphere. At other times, sudden, and even extreme changes in the temperature of the air are unattended by the prevalence of such ailments.

The cunningest thermometer yet invented can not with any certainty predict for its owner the onslaught of a "cold in the head." There are, both in the profession and among invalids, those who have unfaltering faith in instrumental omniscience. Almost every one has seen the super-scientific, thermometer-ridden invalid, who seems to consider it a religious duty to "sniffle" after every sudden fall of the mercury—and only then; who eats hungry only when the hand on the dial points to the meal hour, and then stuffs according to the precepts of some wild (but *scientific*) theory of alimentation; and who, when his unfortunate "innards" rebel, proceeds to take some pet specific which he knows to be "good for" what ails him. If immediate recovery does not follow, it can only be because divine providence fails to attach its legitimate effect to an efficient cause. The name of this invalid is *legion*, and he is faithful until death. His professional counterpart is pointed to the life in Dr. O. W. Holmes' "Stethoscope Song."

The great utility of instrumental observations is not questioned. It is extremely desirable that as many as possible of those phenomena with which meteorology deals should be observed and recorded. But after all, the main ultimate object seems to be to determine the direct and indirect effects wrought by these phenomena upon the human economy. It is not well to become so profoundly interested in the *means* as to lose sight of the *end*. Nor is it probable that any instruments will ever be devised that will enable the beginner to harvest at once all the rich returns that have heretofore rewarded only years of patient and acute observation.

"Thou knowest we work by wit, and not by witchcraft;
And wit depends on dilatory time."

The italics are not Inge's; but the italicized line keenly points our moral, which is: time is an ingredient of experience, which no instruments will eliminate. Moreover, it is quite possible that there are more mysteries in the human body and its ailments than are yet dreamed of in the philosophy of "scopes," "meters," and "graphs."

It is proper just here to say a word about the responsibility assumed by those who may see fit to advise invalids to seek health hundreds of miles away from the comforts of home and the consolations of friendship. There is reason to believe that this grave responsibility is not always sufficiently felt even by medical men. Invalids have been advised to come to southern California, who were so hopelessly diseased that they died on the way. Others have lingered in this life but a few weeks after their arrival. One gentleman, after traveling nearly three thousand miles, died within three days after he was carried ashore from the steamship. The advice that induced these unfortunates to shed upon their long and hopeless journey could only proceed from gross ignorance, or brutal indifference to the sufferings of others. This may seem harsh language, but it is not nearly severe enough to do the subject justice.

Probably as large a proportion as seven out of ten of the confirmed invalids who come here, *come too late*. I believe it to be the duty of an honest physician to tell his patient, unless there are excellent reasons to hope for recovery, the best thing he can do is to stay at home. No man begins to appreciate the blessings of home until he falls sick; no sick man entirely realizes their inexpressible value until he has left them behind him. It is a sad thing to die among strangers.

Not only do invalids, as a rule, come too late, but they expect too much. They seem not to have the slightest conception of the nature and extent of the benefit they may have reason to expect from a mild and healthful climate. Perhaps they have been told that if they will remove to certain places, they will "drink in health and strength with every breath." This delightful twaddle they often accept as gospel truth. Of course, the chimerical expectations that are founded merely on the credulity excited by deliberate and unscrupulous misrepresentations, can meet only with disappointment. Good health is not thrust upon one, even in the best of climates. It must be earned. The earning process is comparatively slow. It often stops short of the invalid's hopes. But after all has been done that science and experience can suggest, there remains only the inevitable, against which it is childish and cowardly to shut our eyes.

When a business man, anxious to add to his possessions, finds it impossible to increase his income, common sense tells him there is but one other way to the attainment of his object. *He must diminish his expenses.* This is a sound financial expedient; and the principle is as available in the pursuit of health as in the scramble after money. The condition of all mundane life is constant expense of force. This expense, which we seek to meet with the income of energy derived from the food we eat, the liquids we drink, and the air we breathe, varies greatly with our climatic environment. And a climate is bad or good in proportion to the great or little vital expense it entails upon the human beings that endure or enjoy it.

Among the more conspicuous causes of waste of vital force may be enumerated: frequent and violent storms, extremes of heat, extremes of cold, excessive rainfall, and malaria.

What is claimed for the climate of San Diego is freedom from all these major climatic defects. Tornadoes and thunderstorms are not commonly numbered among climatic peculiarities detrimental to health. Mark Twain, in the *Atlantic*, vents a deal of wit at the expense of Mrs. McWilliams, whom he describes as driven into a frenzy of terror by an imaginary thunder storm. Allowance being made for the humorist's license to exaggerate, Mrs. McWilliams is really a fair representative of a large class of delicately organized persons who always suffer acutely during those terrific storms which are so common in the valley of the Mississippi.

There are those who seem to take great pride in giving others to understand that they revel in thunder storms. To have every atom of one's brain dazzled by a blinding flash of lightning, and then to be instantly knocked into infinite nothingness by a crash of thunder that makes the solid earth tremble to its center may be source of profound delight to these exceptional individuals. I humbly confess my utter destitution of those sublime instincts to which the tornado and the thunder storm appeal. I have spent

more than one night on the great plains, with nothing between me and the stars but a first-class thunder-storm, that was doing its level best to make things lively. A flash of lightning, indescribably vivid, would split the blackness of night, and expand my attenuated consciousness far beyond the limits of the finite; then a horrible explosion of thunder would jam me back into myself with such violence, that I felt that the "ego," of which philosophers talk so much and know so little, had been transmitted into a thimbleful of tepid fog. Not the least of San Diego's attractions is its exemption from storms. Years ago, in the older States, children and nervous people were told that thunder-storms were necessary to purify the air. How villainously foul the air must be to require such outrageous methods of purification. Human lungs breathe no purer or sweeter air than we have in San Diego, yet kindly nature here dispenses with the storm.

There is nothing more certain than that the dreadful distress inflicted upon the nervous and the weak by violent storms, is hurtful to their physical health.

As to the bugbear of earthquakes, of which so much has been said, there has been but one shock in San Diego in the last twelve years, and that so slight that many did not feel it at all. It never broke a dish, nor toppled down a chimney.

Our summers are cool and pleasant. Even in mid-summer the sea-breezes are sometimes unpleasantly cool to those in delicate health. But this is the case only close to the sea. The great ocean current, just off the coast, is one that flows from the far north, and it is the blessed cause of the absence of those extreme summer heats that occasion so much distress and so many deaths in the States east of the "Rockies." Persons coming from the East often leave their flannels, and load themselves with linens—a great mistake. This is not a "linen" country. They should leave their linens, and bring their flannels. The day will surely come when San Diego's fame as a summer resort will equal, if not surpass, its reputation as a winter resort. And yet our winters are nearly perfection. The orange, lemon, lime, and banana flourish in the open air.

What little rain we have falls in the winter. The average rainfall is said to be about ten inches per annum. I can hardly believe it to be that much. At any rate our rains are so infrequent that we always enjoy them.

Of the fogs we usually have small cause to complain. But within the past six months we have had more than during the six preceding years. The past year has been far below the general average.

With malarial disease in all its forms, I am familiar, from the fatal "congestive chill" to the mildest intermittent. But that acquaintance was all gained elsewhere; in Illinois, Missouri, Texas, and Arizona. During the twelve years spent in practice in San Diego, I have not seen one case of malarial disease that originated here, nor do I know of any such case occurring in the practice of other physicians.

The summing up of San Diego's climate peculiarities is this:

No tornadoes.
No thunder-storms.
No extremes of heat; nights always cool.
No extremes of cold.
No excess of rainfall.
No malaria.

To this I should have added, were it not for the experience of the last six months, no *fogs*; for fogs have heretofore been so light and so infrequent, that they were virtually no fogs at all. But to take the record as it stands, where is there under the sun a climate that has better title to the adjective "good," or even to its superlative "best?"

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The sea-side has a fascination about it that has been increased by practical experience by those who make it a summer resort, and by others who make it a winter resort; and lastly, by the practical man who builds his home by the sea—a home where the summers and winters are of a delightfully equable climate on our south Pacific Coast of Southern California, San Diego, Santa Monica, San Buenaventura, Santa Barbara, and Monterey are living examples of what a home beside the sea can be made.

The *American Colony*, shown in the accompanying map, is probably the best located site on the entire Pacific Coast for a settlement. The location is very beautiful, overlooking the harbor, bay, and ocean towards the south, with the Catalina Islands in plain view twenty miles out to sea; protected from the winds on the north, east and west, with a constant and delightful breeze from the south, coming tempered with mildness from across the great expanse of waters. It has a very advantageous location, having Wilmington, the principal shipping port in Southern California, only three miles away, connected by a good wagon-road.

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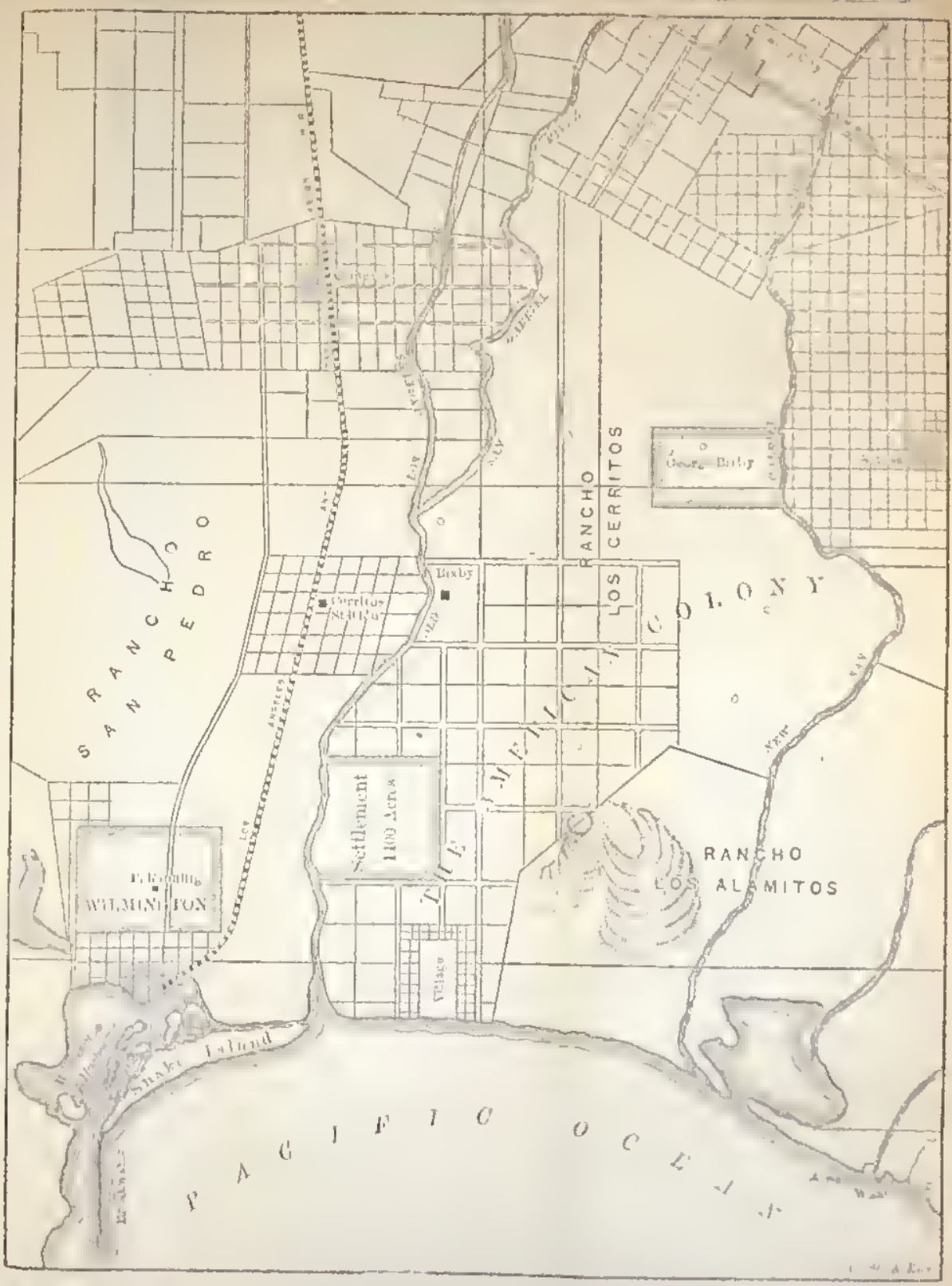

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The Colony tract contains 10,000 acres, mostly of a rich sandy loam soil, every acre of which can be cultivated and made exceedingly productive. The mesa is of a light reddish sandy loam that works easily, is warm and very productive; produces excellent grain of all kinds. The wheat crop grown on some six hundred acres of this mesa land yielded an average of thirty bushels per acre this year. This land is equally good for all kinds of fruits, and especially the vine.

On this tract is to be located a village near the beach, and the remainder of the tract is to be divided into lots running 5, 10, 20, 40 and 80 acres each, and to be sold at prices varying from $15 to $20 per acre; payments to be made in three annual installments. For further particulars, address W. E. Willmore & Co., this city. In our next issue a full prospect and plan of the colony will be given, together with a map of the county, village plat, and other engravings.

FULTON WELLS.

I have much pleasure in bearing testimony to the very favorable opinion I have formed of Dr. Fulton's hydropathic establishment. The sulphurous waters which abound here, an analysis of which I have before me, are very valuable, especially in cases of chronic dyspepsia, rheumatism, gout, and skin diseases, while the appliances for their use in the shape of baths, etc., are most convenient, the climate is delightful, and the comforts of the house, under the able management of Dr. and Mrs. Fulton, render a sojourn here most pleasant and beneficial to all, but especially to those in search of health.

J. Higham Hill, M.D., C.R.C.S.
Edinburgh, London, England.

EARLY FRUIT FARMING IN LOS ANGELES.

The most valuable land in our county is that which is situated in our foothills, and which is so rarely visited by frost that an early crop of fruit and vegetables can be counted upon every year. But there is great variance in the temperature of our foothill lands. They can not all be depended upon for early crops. Some are so situated that they are subject to frost currents; others are without the warm soils so necessary to the speedy vegetable maturity. The experience, however, of a number of years of successful cultivation has shown that there is a tract of foothill land on the west side of the Cahuenga range which always produces early vegetables. John Nicholls has now for several years devoted his entire attention to raising early tomatoes and other vegetables on fifteen acres on this tract. His success has been marvelous. He netted $1,100 out of his early tomatoes this spring, and he has sold fresh chilies in San Francisco at the rate of 75 cents per pound. He gets his first tomatoes into the San Francisco market two months earlier than the regular crop reaches it. He is then ready to supply the home market in competition with the ordinary crop, and when the price falls very low he still has an abundance of the fruit left on his vines to sell for canning purposes and for turning into catsup. Thus, out of his fifteen acres of vines, he realizes returns which would be considered large from an ordinary farm cultivated to wheat or corn. With far less labor and less expense than it costs to run a farm of 160 acres, he clears every year more money than can be realized from such a farm.—*Los Angeles Express.*

GIRDLING PRUNES FRUITFULNESS.—Some years ago one of our citizens bought and set out some thrifty young apple trees. On one of them he neglected to remove the wooden label which was attached to one of the limbs by a copper wire. Two years later he found that the copper wire was entirely imbedded and out of sight in the bark of the tree, and that year the limb was so heavily loaded with apples that he was obliged to prop it up, while there was not a blossom or apple on any other limb. Last year one of our neighbors, who has apple trees were in full blossom, carefully girdled some limbs on several trees, and the blossoms produced no fruit on the limbs thus treated; but this year those limbs have blossomed full, and no blossoms on the limbs that bore last year.—*Hartford Post.*

TO THE DESPONDING.

Take this for granted once for all,
There is neither chance nor fate,
And to sit and wait for the sky to fall,
Is to wait as the foolish wait.
The hand longed for you must earn,
It is not of the things men lend.
And though the lesson may be hard to learn,
The sooner the better, my friend.
That another's head can hold your crown
Is a judgment of all nature
And to drag this man, or the other down
Will not in the least raise your.—*Alice Cary*

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SCALE BUGS.

By Prof. J. H. Comstock.

THE FORMS OF SCALE BUGS OCCURRING ON THE PACIFIC COAST.

The following paper was read before the State Horticultural Society:

Up to this time I have studied fifteen species which infest cultivated plants in sufficient numbers to cause injurious. These will be described at length, with others occurring in the East, in a report which I am preparing for the Department of Agriculture. The most common species of this State is the "black scale," which is very abundant on citrus trees and olives, and also infests many other plants, including the deciduous fruits. This agrees with descriptions of a common European species—*Lecanium oleæ*—and, I presume will prove to be the same. If this be true, the species was doubtless brought from Europe on citrus trees. Another very important species is that known as the "red scale." This is as yet undescribed. I have, however, in manuscript, ready for publication, a description, including figures of different stages and both sexes. There is abundant proof that this species was introduced from Australia. These two examples are sufficient to show the danger of introducing pernicious pests with exotic plants. The same thing has happened in Florida. Although the two species just mentioned do not occur in that State, one very closely allied to the "red scale" has been introduced from Cuba. And another, the most common on orange in that State, is a European species. All of these insects, however, are not foreigners. For example, there is an undescribed scale common on olive, pear, fig, and other trees in this State which I have good reason to believe has spread in the cultivated trees from the native willows. And in Florida there is a scale which is quite common on citrus trees and other plants, which I believe has spread from the gall berry, an indigenous bush very common throughout that State.

HOW THE SCALE INSECT IS SPREAD.

A word as to the mode of spreading scale insects. As I have already stated, with most species the adult female is firmly attached to the plant upon which she lives; she is consequently a "stay-at-home lady." And although the adult males are winged, it is obvious that the pests could not be spread by the flight of that sex alone. The newly-hatched young of both sexes, however, are very active, crawling about from one part of an infested tree to another, or even to other trees which may be near. It doubtless often happens that these tiny creatures are brushed from the trees by persons or vehicles passing, and are thus distributed. Or they may crawl upon the feet of birds, and thus be carried long distances. But the most common mode by which these pests are distributed is by the transportation of trees and fruit infested with living scale insects.

METHODS OF PREVENTING THE PEST.

These facts suggest the following methods for preventing the occurrence of these nuisances. In planting an orchard, choose as isolated a place as is practicable. If isolation can not be obtained, induce your neighbor to join you in your efforts to grow clean fruit. Use the greatest care in purchasing trees or importing buds. Before planting, thoroughly wash all such trees with an insecticide, even if they appear to be clean, for the untrained eye may fail to detect early stages of these insects. Do not visit infested orchards unnecessarily, and above all things do not carry home specimens of scale bugs as curiosities. Watch your trees carefully, and if one is ever found to be infested with scales, remember that no better investment can be made than to burn that tree, and that no time is so good for doing it as the day when it is first found to be infested. The system of exchange of fruit boxes is a very dangerous one. Each shipper should have his boxes marked, and insist on not receiving boxes belonging to other shippers.

REMEDIES FOR EXTERMINATING THE PESTS.

In many cases, however, the pests have gained such a foothold that these methods of warfare are impracticable, and a remedy which will destroy these insects without injuring the tree is desirable. I have begun a large series of experiments with different substances, hoping to find such a remedy. These experiments are, as yet, incomplete, and I will only state that so far I have found nothing more desirable, taking into consideration its value as an insecticide, its effect upon the tree, and its cheapness, than a strong solution of whale-oil soap. This I apply with a fountain pump or a garden syringe. And as it is impossible, almost, to thoroughly wet every insect by a single application, several are usually necessary.

Many other substances have been tested, and the results of the experiments will be published as soon as practicable. I will add, however, that I have seen most excellent results in the orchard of V. C. Mason of San Jose, from the use of the following mixture: One pound concentrated lye, one pint gasoline or benzine, half pint oil, five gallons water.

EFFECT ON ORANGE TREES AND ORANGES.

Associated with certain coccids, and especially with those which do not form a scale-like covering to the body, as has been already described, is a black substance covering the leaves and fruit. This is very abundant in this State on oranges, oranges, and other plants infested by the black scale, and in Florida on trees infested by the mealy bug. It is popularly known as "smut." It is a fungus, and has been determined by Prof. Farlow, of Harvard, as *Fumago adscina*, a species which has long been known in Europe on olive and orange trees. It is a very serious pest, marring the appearance of plants, and in certain sections of this State where it covers oranges, greatly reduces the market value of the fruit. An excellent paper on the natural history of this fungus has been published by Prof. Farlow in the "Bulletin of the Bussey Institution of Harvard University," in which the following paragraph occurs: "The result of our examination of the diseased orange and olive leaves is briefly as follows: The disease, although first attracting the eye by the presence of a black fungus, is not caused by it, but rather by the attack of some insect, which itself deposits some gummy substance on the leaf and bark, or so wounds the tree as to cause some sticky exudation on which the fungus especially thrives. It is not denied that the growth of the fungus greatly aggravates the trouble already existing, by so encasing the leaves as to prevent the action of the sunlight. We only say that in seeking a remedy we are to look further back than the fungus itself—to the insect, or whatever it may be which has made the luxuriant growth of the fungus possible."

My own observations confirm these conclusions. In fact, before I had read Professor Farlow's paper, I had learned to consider the presence of fungus on the leaves as a sure indication of the presence of scale insects. And as I had never been able to find the fungus organically connected with plants, but simply growing over the surface of them near the coccids, and easily removed by rubbing, I supposed that it grew upon the honey-dew which the insects excreted, and which so frequently attracts the visit of the ants. This honey-dew is doubtless the gummy substance which Professor Farlow observed. Professor Farlow suggests, as a means of destroying the fungus, the use of alkaline soaps as strong as the trees will bear. If our conclusions respecting the fungus be true, this remedy will be a very effectual one, for it will destroy the scale insects which render its presence possible. An interesting fact which I have frequently observed is that where there is a luxuriant growth of this fungus, it not only feeds upon the honey-dew, but attacks and destroys the young coccids themselves. Thus in some instances I have found a large proportion of the young coccids on a leaf destroyed in this way, and when the remains of the insects were examined with a microscope, the fungus was seen projecting in great quantities from them. At first thought this would seem to be a natural remedy; but I find that it is rare that coccids are destroyed except upon the upper surface of the leaves, where the fungus is most abundant. This is probably due to the lodging of the falling honey-dew chiefly on that surface of the leaves, and the consequent confining, as a rule, of the fungus to that part, and there always remains a sufficient number of healthy coccids on the lower surface of the leaves to restock the plant.

TRY IT.—Place a bunch of perfectly sound grapes near your bee-hives, and in a few hours examine them and see if the bees have eaten any; if not, puncture several with a pin and note the effect on the sound grapes and the ones punctured, and then let us know if the bees really eat grapes. We ask for a full test, and reports from grape-growers and bee-keepers.

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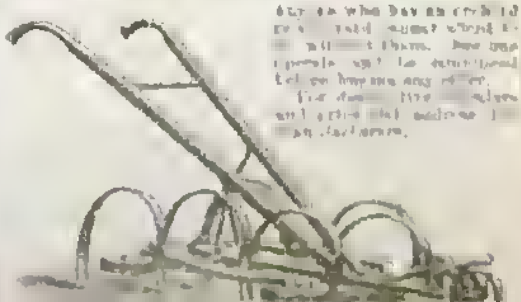

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During the present and two following months, breeding fowls require rest and a low diet to prepare them for the breeding season that follows. To prepare a fowl, either male or female, for exhibition, seriously impairs its breeding quality, and a large percentage of the eggs of such fowls will prove unfertile. Unless the male bird is healthy and vigorous, his chicks will be puny things, susceptible of colds and roup at every change of temperature. If you wish to produce fowls that will meet with ready sale, you must produce good ones, and such fowls you can *not* raise from inferior stock. Care should be used in feeding fowls kept for breeding, as feeding too much fat-producing food, or feeding to force egg-production, will result in unfertile eggs, if not loss of fowls. That at least one half of a given clutch of eggs should contain chicks at the proper time, should be guaranteed by every breeder, as customers have rights which should be respected, and it is for the best interest of the breeder himself that he should please his customers. Eggs used for breeding during July and the three months following, generally prove unsatisfactory, as fowls moaning or in molt are unfit for breeding purposes, and a breeder should so inform his customers. Molting is a trying period to most fowls, and depend upon it, they need your care now more than ever. And you will lose nothing by careful care and properly feeding and protecting them from the cold winds and fogs at night, as you would protect yourself under the same circumstances. See that they have shade during the hot weather, if it is only a clump of weeds. Shade outside of their houses is preferred by them, and can be made by driving short poles in the ground, making a low shed, covering it with willows or any cheap material. It is these little things attended to that go to make profit instead of loss to the poultry keeper.

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The destruction occasioned by the insignificant-looking curculio is so great to many places that people have been compelled to let their plum trees die a natural death, without ever having fruit, by a single year of fruitage, for the care and expense bestowed upon them. The simple method proposed of late years for the preservation of this desirable fruit, which comes in to rating between the cherries and other small fruits and the national fruits—pears, grapes, peaches, etc.—has been to give a sudden jar with a billet of wood to plum trees, when the plum is in its earliest forming stage, thereby dislodging the curculio and causing it to drop into sheets which you have spread beneath the tree. Even then the sly creature may elude your vigilance, for they curl themselves up and look so much like an innocent dry bud that, unless you know their aspect and tricks throughout, they will cheat you into ousting them out with the *other* bits of sticks; and they "laugh in their sleeve" as they resume your favorite fruit tree and proceed to puncture the little green balls with their crescent-shaped bite, and insert therein the cotton maggot, which shall, at the same time, blight your plums and your hopes. Those who *keep fowls* have a surer and more convenient remedy for this difficulty always at hand. The curculio burrows in the earth, and as the time for the setting of the favorite fruit approaches, it crawls out into the light and looks about for a while before attempting to climb or to fly. Then is the time to "nip it in the bud." Your fowls relish the little creatures with the big name, and by allowing them to patrol the ground beneath the trees, they will capture every one, and a few months later your fruit dish and preserving can may be filled with this delicious and perfect fruit.

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VOL. III. 1880. No. II.

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SOUTHERN CALIFORNIA HORTICULTURIST.

Vol. III. LOS ANGELES, CAL., NOVEMBER, 1880. No. 11.

OUR EXHIBITIONS.

It is admitted on all hands that never before has so full and satisfactory a display of the resources of this section of the State been exhibited as is now collected in the Horticultural Pavilion. The contributions are so voluminous, and each so interesting of its kind, that the visitor is lost in a maze of exhibits forming altogether one of the most splendid displays imaginable. If there ever had been any doubt about the capacity of Southern California to produce deciduous fruits, heretofore considered to be almost exotics in the more genial latitudes, the present exhibition will completely dispel the delusion. The rigorous temperature of the north—supposed to be exclusively favorable to the perfect maturity of the apple—has never produced a better quality of fruit than the apples now gracing the stalls and tables of the Pavilion. They are there of every variety and in a perfection of symmetry and appearance such as we have never seen surpassed. And the size of them! New York, New Jersey, or Oregon has never produced a larger apple than can be seen at our exhibition. As to taste, the talk about the absence of the delicate flavor which characterizes the northern apple is all moonshine. The aroma of our fruit is exquisite, and it is as grateful to the palate as the most fastidious taste could exact. Then the exhibits of pears, quinces, and cognate productions are almost interminable. As to our flora, there never has been any pretense that our section did not produce a greater variety and a finer development of flowers, shrubs, evergreens of all kinds, than any other part of our favored State. The visitor to the Pavilion who is botanically inclined will there find contributions of the rarest exotics—of plants indigenous to every quarter of the globe, raised here to perfection. As to the root and pumpkin families, gigantic representatives stare one in the face at every turn. Although the grape season is backward, the fruit of the vineyard is splendidly represented. Muscats of enormous size, and the infinite varieties of grapes which have come from stocks imported from the best vineyards of Europe, are displayed in profusion throughout the hall. Wheat, corn, barley, sorghum, the sugar beet, flax, rye, oats—in short, all the products of the field—all the gifts of Ceres and Autumnus—are on exhibition. Our section has not only developed into a first-class wheat-growing section, but into one where sugar may be relied upon as a staple production of the future. It is not too much to say that the exhibition, by demonstrating our unapproachable agricultural capacity, will inaugurate a new era of industrial prosperity in our district and county. The great facts have been gathered together and placed before the people. They are entitled to see at a glance the immense possibilities with which nature has endowed our section. They can read, as it were in an open book, that we possess the soil and the climate to render us the richest people on the footstool. They can see that there is hardly anything worth producing which we can not produce; that, while we can raise in great abundance the ordinary products of the farm of other sections, we can at the same time so ramify our possibilities as to supply to less fortunate localities a line of products at once rich, rare, and eagerly sought after. Remember that our vintages will hereafter form the basis of an industry that will pour into our laps a constant stream of gold from all the nations of the earth; that oil, honey, and wheat will be sought for in our markets; that sugar is destined to become one of our most profitable staple productions; that the fruits of the orchard and the products of the garden will richly reward the farmer and the cultivator; that our orange crops will go on increasing in quantity, and that the breeder and the stockman will here find their bonanza home. Remember all this, and looking at the two great fairs now attracting the attention of thousands, and you will say such a section must have a future of wonderful prosperity before it. Visitors from abroad who go to the Pavilion and the Park will bear us out in this, and the two fairs of 1880 will mark an epoch in the industries of Southern California from which will date its lasting era of wealth and abundance.—*Los Angeles Express.*

FINE ARTS.

The space allotted to this department was not so crowded as last year, allowing a more advantageous display. In the picture gallery, the sixteenth-century painting of "Poverty" attracted general notice. Many of the pictures by home artists were highly creditable, and in every respect the exhibition spoke well for the taste and culture of the community. In addition to the usual display of needlework, many exquisite pieces of hand-made lace were shown, testifying that the light and elegant employment of lace-making is gaining ground among women once more. Mrs. E. C. Starin exhibited a number of screens painted on satin, which were universally admired, and a bird cage in scroll sawing, made by W. Lacy, Jr., of Los Angeles, was unquestionably the most delicate and beautiful specimen of scroll work ever exhibited in the pavilion.

Ingenious and graceful parlor ornaments of sea-moss, ferns, straw work, and shells bespoke the ease with which homes may be decorated with material lovelier than art can supply, and yet within the reach of every one.

Painted cups and plates were enthusiastically admired by those who esteem it a luxury to sip their tea daintily, and find a dragon-fly in the bottom of the cup, or partake delicately of their omelette from the back of a lizard.

We take it as a favorable sign that while this department has not increased in size from year to year, it has gained in excellence. As is generally the case, the first exhibition was crowded with inferior work, which was withdrawn before competition. This is proof that such displays are valuable as means of culture, and the general interest manifested in this branch of our annual exposition indicates a ready appreciation of decorative art.

A series of races was held at Agricultural Park in Los Angeles, the same week with the Horticultural Fair, but for some reason best known to its management and unknown to us, the editor of this paper was not invited in the customary way, and we can not favor our readers with a report of the races.

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CIRCULATION - - - - 5000.

We have had our fair, and it has been a success. In every point of view it was a grand success. Southern California has crossed the divide, and our progress is now easy. The fair of 1880 has been demonstrated that the people of this district are in better circumstances financially, than they have been for three or four years past; that they have made great progress in horticulture and agriculture; that they wish to make greater progress, and for that purpose come together once a year, compare their products, and learn all they can from their neighbors. And there was much to be learned at the fair. First, in regard to

APPLES.

Only four years ago, the newly arrived visitor to Southern California was told by most all residents, and readily believed, that this country would not produce apples worthy of the name and the eating. Some had planted trees, but they would not come to anything. Apples were a product of northern countries, of cold air and wet soil; they could not be produced where the converse of these facts held. We must ship our apples from Oregon, and pay $2.50 to $3 per box of less than a bushel.

At the joint fair of 1877, knowing ones hinted that the fine though small display of apples was chiefly imported from Oregon; denials had no effect with them, and the public suspected they were right. In 1878, the exhibit of apples was small and confined to a few sections, but the samples were of excellent quality, and everybody knew they had been produced here. In 1879, the display of apples was increased in quantity and quality. But it was left for the fair of 1880 to make the revelation that no country on the face of the earth can surpass Southern California in the production of large and fine apples. Producers are themselves surprised that they have done so well, and that so many others have done equally well. We knew we had a semi-tropic country, but it turns out we have a temperate country as well. We can equal countries further north in their leading fruits. Mr Hixson, of the leading fruit commission firm of Hixson, Justi & Co., of San Francisco, looked through the pavilion, and said that the apple orchards of Northern and Central California could not be called for their finest apples and equal our display.

And we have equally good authority on the subject of our

PEARS.

Mr. W. H. Wright, formerly connected with the San Jose Fruit Packing Company, now the superintendent of that company's cannery and dryer at Riverside, said to the editor of this paper that we could not write too strongly in advocating the production of pears in this district. A year's experience here has taught him that we produce a finer quality and as good a yield of pears as Central California, and we will have the advantage of being nearer the market in the Eastern States. Pears are a very marketable production, because they will keep some weeks; and, indeed, are only good when ripened off the trees. What do you think of that, horticulturists of Southern California? You can excel the pears for which people of the Eastern States pay from ten to twenty-five cents apiece at retail, while a few years ago you thought you could not do much with pears.

IN WHEAT ALSO

We have made a new departure. That cereal has heretofore been supposed to be the product of colder countries alone. Physical geographers taught it and the people believed it. But the Pacific coast of the United States has presented a series of new problems. Combinations of the products of hotter and colder countries, not before deemed possible, have been made here. Not the least of these is the growing of wheat, that leading product of Russia, side by side with oranges, olives, and other fruits of the Mediterranean. The exhibition of wheat at the Pavilion was very fine and certainly very reassuring. Mr. W. E. Willmore had made a very artistic arrangement of wheat in the straw as a background for the stage. It was in imitation of the sun, with a head of Ceres as a center, and the straws as rays. The heads of wheat were from three to five inches in length, large and heavy, and rust, which has been our great enemy, was nowhere to be detected. Rust did some damage this year in this section, but compared with other years it was slight; and this is attributable not to the character of the season, which was bad enough to mildew grapes in some places, but to the corrected choice of varieties. Samples of wheat in the sack, and flour, were as good as one could wish to see.

THE HORTICULTURAL SOCIETY

Comes out of this fair in much improved circumstances, financially, and with the full confidence of the community. It is now in a position to be fearless of debt. Its expenses, which were formerly very high, in building and furnishing the Pavilion, have now been reduced to a minimum. The cash returns of the fair place it on a firm basis, and there is nothing to prevent its pushing onward.

We have no apology to offer for filling this number with notes on the fair and the list of awards by committees. It is the most important subject of the year, and will deserve more comment from time to time.

A CARD FROM EXHIBITORS.

The success of an exposition such as has been witnessed during the week in Los Angeles, depends very much upon the proper management in its formation, and during exhibition.

That the Horticultural Fair of Southern California has been a most gratifying success, both in the character and number of the exhibits, and the large attendance of visitors who have thronged the hall daily, expressing their surprise and pleasure at the magnificent display on every hand, and of the good management at the Fair in every department, is universally admitted.

For this reason the following exhibitors of the Fair of 1880 desire to express their appreciation of the successful efforts of Mr. Geo. Rice, Secretary of the Society, in organizing and conducting the Fair. Mr. Rice came to Los Angeles only one year ago, and in that short time has won the good opinion of all who have come in contact with him.

As soon as he was elected Secretary of the Horticultural Society he entered upon the work of organizing the working forces of the society to develop a grand Horticultural Fair for Southern California, which was seconded by a public-spirited and harmoniously-working Board, who aided him in every way to bring about the splendid exposition of the products of Southern California just closing.

Mr. Rice's practical sagacity and uniform courtesy and urbanity contributed so much to the successful exhibition of this year, that we regard this expression of our appreciation of his efforts his just due.

J. W. Anderson; C. W. Wilcox; J. W. Venable; Geo. Hunter; E. B. Grandin; J. M. Asher; Kimball Bros.; H. M. Higgins; R. R. Bryant; M. D. Halladay; Joel B. Parker; F. M. Antisell & Co. San Francisco; J. R. Mendoza, San Francisco; W. T. Clapp; S. B. Bryant; M. Rosenbaum; N. A. W. Kellogg; N. Lerering; J. N. Gilchrist; John W. Wilson; David Townsend; G. D. Compton; E. M. Hamilton; J. B. Clapp; Dr. Ezra S. Carr; Mrs. Jennie C. Carr; Sherman, Hyde & Co., San Francisco; L. J. Stengel; B. W. Mower; W. H. Kimball; and many other exhibitors.—*Los Angeles Express.*

CARD FROM MR. RICE.

Mr. George Rice, Secretary of the Southern California Horticultural Society, desires to say to exhibitors, assistants, visitors, and all concerned, that he is grateful to them for the confidence they have shown in the management of the fair of 1880; and that to their efforts is due the success which has crowned the undertaking. The people of Southern California have shown that they understand how to place their products before the public for their mutual enlightenment and the posting of strangers.

WOMAN'S WORK IN THE PAVILION.

EDITOR SEMI-TROPIC: The sign "Ladies' Department" at the left of the main entrance by no means indicated the only place where woman's work was seen in the pavilion. California is pre-eminently a woman's country, and innumerable light and profitable industries suggested themselves to every thoughtful observer of the display in the horticultural hall. It has been said that women work hard in California. This is unquestionably true; intelligent men and women the world over are busy, and the Golden State is no haven of indolence. Even idleness, in all places and among all classes, is constantly in search of employment; women of fashion paint plaques and tiles, or embroider screens and weave laces, and certainly if one might choose between raisin-making on a vine clad hillside under a perfect sky, and following the wealth and fashion of an Eastern city into the stifling heat of a pottery, there to design and mold the obedient clay, in their devotion to *faience*, health and comfort at least would urge the former.

We find the women of California apiarists, floriculturists, raisin-makers, growers of small fruits, and managers of orchards and poultry farms. To these employments are added the dairy interests, and the callings open to women everywhere, and yet the field of woman's work is almost unexplored.

The manufacture of perfumes from flowers promises to furnish suitable and pleasant occupation for many women. We were sorry not to learn more of the beginning of this industry in Santa Barbara county through the medium of the exposition. It is a fact well known to housekeepers, that jellies and marmalades are not to be found in any western grocer's stock. The preparations so labeled are destitute of flavor and rich in gelatine; the wrapper once lost, they remain, like Poe's raven, "Nameless here for evermore." To any woman or company of women who will place a good article of actual home-made jams and jellies on the market, there is a certainty of profitable returns. Guava jelly and orange marmalade command a high price in Europe and America, and experiments in this line are chiefly in the hands of women. Miss Hinckley's display of candied fruit was full of suggestions to the industrious, and indeed the entire exhibition in this line testifies that an energetic woman of skill and small capital might form the nucleus of an industry in Southern California, which would afford occupation for numbers of her own sex, and prove a source of profit to the originator. Such establishments stand on a firmer basis when grown from small beginnings, and it is the universal experience that an honest article well made, even at a high price, will eventually crowd out imitations. Fruit prepared in various economical (?) ways, and unfit for immediate table use, are in the end most expensive, as every housewife knows. C. G.

HORTICULTURAL FAIR.

The exhibit of temperate zone fruits at the Horticultural Pavilion, as a whole, would do honor to any of the noted fruit States of the Union, while the grape display, though by no means so complete as it might have been, is such as to excite the astonishment of visitors from the East. Canned fruits, cheeses, butter, and other homely horticultural and agricultural products, show up handsomely. The specimens of tall corn, of big squashes and beets, of mammoth quinces, and other kitchen garden vegetables and fruits, are very superior, and show very plainly what a commanding position Los Angeles County and Southern California are destined to attain as producers, leaving their citrus specialties and semi-tropical fruits out of the question. We expect, before another half dozen years have rolled around, to see an exposition of the dairy products of this county which will excite the respectful consideration, perhaps the envy, of the cheese men of Goshen. On the whole, we feel like demanding a supplemental citrus fair, to be dedicated to oranges, lemons, limes, pomegranates, bananas, and the other fruits in which this section has no competitor on the Pacific Coast within the limits of the United States. Such a fair could be held in the early spring, when the oranges are at their ripest, and the spectacle would be memorable for the exquisite ornamentation that orange boughs and pomegranate blossoms would admit of. A scene of enchantment, equal to anything in the Arabian Nights, could then be easily evolved. But, as it is, we are very well satisfied. The exposition has realized the expectations of the most exacting. It has shown that we have made tremendous advances in the cultivation of the more homely farm products, and it has demonstrated that our farmers are fast reaching a stage at which they need envy no other husbandmen on earth. "Excelsior" has been and will continue to be their motto.—*Los Angeles Herald.*

MR. H. GORREN, of Santa Ana, made an exhibit of grapes at the exposition, which attracted universal attention. They were of several rare varieties, and showed that that gentleman has had much experience in viticulture. Mr. Gnepper took the first premium for the best half bushel of white potatoes.

DR. ELMENDORF, of Santa Ana, by his fine display of apples, shows that his locality is adapted to the successful culture of that fruit. The samples on exhibition were admitted by experts to be fully equal to those raised anywhere else on the coast.

Now is the time to subscribe for *Semi-Tropic California*—only $1.50 per year.

PRESIDENT HAYES AT THE FAIR.

The words of J. De Barth Shorb, in introducing the President, were so impressive and elegant that we give them in full below:

Ladies and Gentlemen: In introducing to you the illustrious guest of this occasion, it gives me great pleasure to pay to him personally that tribute of respect he so richly deserves from us all. From the time of Washington down, no presiding officer of these United States has shown so high a regard and just appreciation of that which has made our common country great and glorious; I mean her agricultural interests. I hope, Mr. President, that in the coming years your successors in this high office may emulate the example which you have so worthily set them. I therefore, with great pleasure, present to you the President of the United States, the friend of the American farmer, Rutherford B. Hayes, of Ohio.

VENTURA.

Our northern neighbor, Ventura county, is not as well known as it will be in the near future. It is a land of orchards and grain fields, corn lands and vineyards, brooks and springs of the clearest and purest water to be found in Southern California, and oil wells which are inexhaustible. From one of the thriving little valleys in this magnificent county, there came an exhibit to our fair, which does credit to Ventura as a dairy country. Messrs. Kellogg and Sewell sent down some of the finest cheese we have ever set our eyes upon. It was in every respect first-class, and is, we trust, the pioneer of many more to be established in the little county which is so amply able to furnish material for many more such enterprises.

TUSTIN CITY sent the largest pumpkin to the fair—weight, 211 pounds. It came from the ranch of Mr. H. K. Snow, a gentleman through whose enterprise we were indebted for the magnificent display of fruit, etc., from that little settlement.

GEORGE WRIGHT'S imposing wheat, sometimes called Goosemack rye, was much noticed. Mr. Wright raised it in the Azusa, and claims for it that it will make more grain and double the hay to the acre yielded by any other variety of grain.

Mr. S. W. Pietle exhibited a navel orange, 14½ inches in circumference, and not being near ripe, it would have increased probably to about 18 inches.

The heaviest pumpkin of the fair of 1880 was from Tustin. It weighed 211 pounds and measured 6 feet 9 inches in circumference.

MR. J. H. BAKER, of Pasadena, exhibited a fountain at the fair, which seems to be a valuable invention, and especially adapted to Southern California.

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Many people claim that a tree should be left to grow in an entirely natural form, for the reason that nothing can be more beautiful than nature itself. That is a good major premise, but there is no minor premise to justify the conclusion. It is true that we can not improve on the beauty of nature; but it is not true that a limited space of ground can be made to look like nature. Art is certain to make its appearance. We must have walks and drives and streets. Nature has none. If we have trees in our streets, they must be along the sides. This necessitates straight rows, which do not resemble nature. Drives are nearly the same, and walks not much different. You can not imitate nature. You can only harness her to your art.

Now we have a rule to guide us. Plant your trees and prune them in such a way as to gain the most beauty. Look at your tree. Does it please you? Does it please your neighbor? If so, let it alone. If it branches too low, cut the lower limbs off. If it is not symmetrical, prune it into shape.

Let us apply this rule in a few familiar cases. A pepper tree branches from the ground up if let alone; but the general taste is that it looks better pruned up ten or even twenty feet. A cypress tree branches from the ground and grows a tolerably compact and symmetrical top. Do you think those closely clipped and shaven, lumpy cypress trees that ornament (?) so many door-yards in such large numbers are beautiful? I do not, and that is the reason I have troubled you with this article.

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Mr. J. P. Fleming, of Downey, was awarded the first, and J. W. Silkwood, of Westminster, the second premium on cane, though the committee make conspicuous mention of a sample exhibited by Mr. J. B. Clapp, of Pasadena, the premium articles having been raised on moist, the other on mesa land. The committee report that the cane stalks were from nine to ten feet in height, thick and rich in saccharine matter.

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The exhibition at the fair included seed, straw, and tow. There were eight entries of seed, and several of straw and tow. On seed, Mr. Eads, of Pomona, took the first, and Messrs. Clapp & Graves, of Centinela, the second premium. On straw, Asa Ellis, of El Monte, took the first, and Thomas Wiggins, of Azusa, the second premium. On tow, Asa Ellis took the premium, the committee stating that it showed good quality for making both bags and paper. The localities show that it is a product of both low and high lands.

WOODHEAD & GAY'S DISPLAY.

These liberal gentlemen, who are fruit dealers, offered the special prize of $25 for the finest display of California fruits, and competed very ably for the premium. Their sources were limited only to the State, though of course, practically, to the southern counties. That their exhibit was very fine is shown by the fact that in awarding the prize, the committee found the matter narrowed down to Pasadena, San Diego, and Woodhead & Gay. The artistic effect of their arrangement was fine, and attracted the attention of every passer. It owed some of its attraction to the fact that it was known to be an epitome of the fruits of the district. It consisted of grapes, apples, pears, peaches, oranges, lemons, limes, Japan persimmons, figs, berries, quinces, chestnuts, almonds, walnuts, peanuts, pot-plants, and seeds.

It is remarkable that an exhibition of fruits drawn from such wide sources, one drawn from San Diego county, and one drawn from one settlement, Pasadena, should be so near alike in amount, in beauty, in variety, and in quality. From this it would appear that some localities are not so closely confined to specialties as has been generally supposed.

BEET SUGAR.

Messrs. Nadeau and Gennert, having dissolved partnership, made separate exhibitions of beet-sugar products. Mr. Gennert had his elaborate set of samples of sugar in thirty-six different stages of refinement, showing the highest possibilities of beets as saccharine producers. He had drawings of a complete factory as used in Germany and at Rockford, formerly Chatsworth, Illinois, at which place it was visited by the writer. He exhibited engravings of two varieties of sugar beets in their greatest perfection in Germany, and living samples of the same varieties grown in Los Angeles county surpassing the German production in size and quality. He added samples of German kiln-dried beets, which looked black, hard, and uninviting; and beautiful, flexible samples of beets dried in the sun here. One fine sample was harvested, sliced, and sun-dried in ten hours at the Duarte, October 16, 1880.

Mr. Nadeau exhibited sugar-beet seed of fine quality; green sugar beets of the best quality; beets kiln-dried and sun-dried, showing the superiority of the sun-dried article; and samples of sugar made from green beets, from kiln-dried beets, and from sun-dried beets; the latter being plainly the best. The results of this year's work are most satisfactory in showing our possibilities.

PAVILION PERIODS.

Pasadena showed the only plate of strawberries at the fair.

Mr. R. R. Bryant informed us that he could guaranty his wife's jelly, for he said, "I raised the fruit and Sally made the jelly."

Woodhead and Gay exhibited a Vicar of Wakefield pear, 7⅞ inches in length, 15½ inches in circumference of the lower end, and 19 inches in longitudinal circumference.

There was a very creditable display of fruit made by Mr. R. R. Bryant of Los Angeles; artistically arranged and of the finest quality, it deserved its several premiums.

Mr. J. E. Hollenbeck's grapevine from the rancho El Molino one hundred and four years old and loaded with Mission grapes, attracted much attention. Its trunk was about eight inches in diameter.

A justice's docket kept by Jos. Doniphan of Virginia, in which George Washington appears as plaintiff in ten suits, attracted much attention. Mr. Doniphan was the first school-teacher in Kentucky and the great grandfather of J. J. Frazee, the exhibitor.

AS OTHERS SEE US.

OPINION OF A VISITOR FROM THE EAST.

At the close of the children's performances, Gen. J. H. Shields, of Florence, took the stand to introduce a visitor, and said:

Ladies and gentlemen: Californians have plowed, planted, cultivated, harvested, and told an incredulous outside world of the results. We have among us to-day a stranger, from the far East, who was but is no longer incredulous, because he came, he sees, and believes. He proposes to make amends for his incredulity upon hearsay by telling you of his belief upon the sight of the horticultural displays which he has examined in this pavilion. I now have the pleasure of introducing Mr. Horace J. Smith, of Philadelphia. Mr. Smith has traveled much in Europe and America, was one of the managers of the Centennial Exposition, visited California in 1877, staying six months; returned in 1879 for a visit of eighteen months. He has a fine residence at George's Hill, Philadelphia, from which only the fine climate of Southern California entices him to absent himself.

On taking the platform Mr. Smith said: It seems proper that some one from a distance, who has no investments here, should give expression to his surprise at such an exhibition as this now before us. When Moses led the children of Israel up out of Egypt and through the wilderness, he was only permitted to take a view of the promised land and die. Those of us who have crossed the alkali desert, and looked down on the golden plains and been still more favored than Moses, to enter in like Joshua to see the fruition, can truly say this is a goodly land and wondrous in its possibilities.

It was my good fortune to visit this coast four years ago, fresh from centennial labors, when, through the courtesy of leading gentlemen, I had an intelligent explanation of the hopes, then entertained, of making this a great fruit and grain producing country. There was then enough accomplished to justify the Calebs who had come to spy out the land in going forward, though it was required that works should go hand in hand with faith. Coming again, the egg that was then hardly laid, we see now hatched—the bud then set has now blossomed and fruited. I wish that the horticulturists of the East, who swelter and freeze alternately, could but see what you have accomplished under more genial skies and more favorable climatic conditions. If, however, the mountain will not come to Mahomet, let me advise you to send Mahomet to the mountain; or, in other words, to send to our principal cities such a collection of your fruits and other productions as will amply testify to the value of your lands. There has been so much gushing writing in the papers about California—a gushing that was truly justified by facts, but was like taffy, in that it cloyed on the appetite—that now it is required that the realized products of the southern section of the State should be seen and handled and tasted. At this moment we stand on the eve of great developments, greater even, I believe, than those which we have already seen. Capital is hastening to your borders with new lines of railroad, and relieving you, by competition, of dependence on the triumvirate who have created the line you know so much better than I that I need not characterize it. If the impulse given to this country by one line has resulted in such wondrous development what may not be expected when these facilities are more than doubled; when the bars of high-priced transportation are let down to ground-floor rates? And here let us pause to give tribute to that far-seeing engineer, John B. Weller, who insisted upon including the grand harbor of San Diego within the limits of the Union when the lines were run and the treaty made which redeemed this favored country from the Mexicans. Imagine how we all should feel at this moment if this safe harbor and future metropolis was ten miles within the boundaries of a foreign country instead of ten miles within our own territory.

And another tribute should be paid to the steadfast men who have fought a winning battle under adverse circumstances, and have compelled capitalists to see the merits of the harbor of the southern coast. And we must accord to New England the credit of being the brains of America, just as France is the brains of the world, and though we are warned not to put our trust in princes, yet if there is any faith to be put in human nature, surely we may trust in the solid men of Boston. But France, too, is hastening to open up a new world to you; and as Mons. de Lesseps has bought the Panama Railroad, and Lieutenant Menocal has demonstrated the practicability of a Nicaraguan canal, a trans-isthmian canal in the near future is assured.

If the projectors of these lines could but see this exhibition, surely their confidence in their investments here would be strengthened. You could point them to the unanimous fact of apples and pears as large and luscious and as fair as any, grown on unirrigated land, from apple pips that were but blossoms four years ago; to lemons grown alongside the apples, that are as smooth and juicy as the Mediterranean ever shipped to us; to chestnuts ripened on trees only six years old; to oranges, rich and luscious, from orchards that annually realize to their owners $1000 per acre; to strawberries as large, prunes as rich in flavor, pickled olives and olive oil superior to the imported. But time would fail me to catalogue the grapes, yielding ten tons to the acre, the grape-vines, 104 years old, now in fruit, and raisins shipped now by the car-load; the flaxseed, plumper and weightier than grown elsewhere; the pumpkins, in weight approaching eight to the ton; the honey, limpid and delicious; almonds, walnuts, pecans, blackberries, guavas, peanuts, melons, and apricots. It is also pleasing to see the diversification of industries, and the manufactories springing up in your midst, for it is very certain that no great State can lean alone on agriculture. The canning establishment of Dimmick & Sheffield at Santa Barbara, should find others in every important district to emulate their success; and the mill in which Mr. Ellwood Cooper makes his delicious olive oil, find other competitors.

If I have but faintly alluded to the success demonstrated by this exhibit in horticulture, I can still less do justice to your grains—your unirrigated corn, and wheat, and barley.

These, however, need no words of mine, for are they not seen and known on the exchanges of the world, and do you not now feed multitudes, who, but for you, would be starved?

One other notable exhibit, however, deserves especial mention, and that is the display of mineral ores from Arizona. This region at your doors is so marvelously rich that the demand made upon your bountiful harvests has already advanced the price of your barley and hay twenty per cent. this season. Instead of having prices depressed by long transportation, and the losses incident thereto, you have an inter-State commerce growing as fast, almost, as your capacity to supply it.

These ores now here demonstrate how easily the debt of the nation can be paid when these coffers of nature are unlocked by the pick and the crowbar. Well has California chosen for her great seal the motto "Eureka," for here indeed is the El Dorado, the desired home for the race, where climate, soil, and other natural conditions are most propitious to health, wealth, and longevity.

DOTS.

Meyberg Brothers' superb exhibition of glass and silver plate.

W. H. Bowman's Duarte corn in ears, 12 inches in length and 9½ inches in circumference.

No department of agriculture was better represented at the fair than small fruits—the babies.

Seven feet 4 inches was the circumference of a Westminster pumpkin at the fair. Its weight was 200 pounds.

W. N. Tedford of Gospel Swamp had at the fair a Gloria Mundi apple, which measured 15½ inches in circumference.

Los Nietos carried off the blue ribbon for largest single cluster of grapes. Weight six pounds, Rose of Peru variety.

J. Sullivan of Santa Barbara exhibited a pear of the Vicar of Wakefield variety, 6 inches in length and 11 inches in equatorial circumference.

Los Nietos showed a mammoth Pippin 15 inches, a yellow Bellflower, 11½ inches, and a white Bellflower, 10½ inches in circumference. And their quality on being tested was found to be of the best.

Woodhead & Gay exhibited the two largest pears in the pavilion. The measurement of the largest is given elsewhere. The second measured 7 inches in length, 14½ inches in circumference of the largest part, and 17 inches in longitudinal circumference.

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The exhibition at the fair included seed, straw, and tow. There were eight entries of seed, and several of straw and tow. On seed, Mr. Ems, of Pomona, took the first, and Messrs. Clapp & Graves, of Centinela, the second premium. On straw, Asa Ellis, of El Monte, took the first, and Thomas Wiggins, of Azusa, the second premium. On tow, Asa Ellis took the premium, the committee stating that it showed good quality for making bath bags and paper. The localities show that it is a product of both low and high lands.

WOODHEAD & GAY'S DISPLAY.

These liberal gentlemen, who are fruit dealers, offered the special prize of $25 for the finest display of California fruits, and competed very ably for the premium. Their sources were limited only to the State, though of course, practically, to the southern counties. That their exhibit was very fine is shown by the fact that in awarding the prize, the committee found the matter narrowed down to Pasadena, San Diego, and Woodhead & Gay. The artistic effect of their arrangement was fine, and attracted the attention of every passer. Award some of its attraction to the fact that it was known to be an epitome of the fruits of the district. It consisted of grapes, apples, pears, peaches, oranges, lemons, limes, Japan persimmons, figs, berries, quinces, chestnuts, almonds, walnuts, peanuts, pot-plants, and seeds.

It is remarkable that an exhibition of fruits drawn from such wide sources, one drawn from San Diego county, and one drawn from one settlement, Pasadena, should be so near alike in amount, in beauty, in variety, and in quality. From this it would appear that some localities are not so closely confined to specialties as has been generally supposed.

BEET SUGAR.

Messrs. Nadeau and Gennert, having dissolved partnership, made separate exhibitions of beet-sugar products. Mr. Gennert had his elaborate set of samples of sugar in thirty-six different stages of refinement, showing the highest possibilities of beets as saccharine producers. He had drawings of a complete factory as used in Germany and at Rockford, formerly Chatsworth, Illinois, at which place it was visited by the writer. He exhibited engravings of two varieties of sugar beets in their greatest perfection in Germany, and living samples of the same varieties grown in Los Angeles county surpassing the German production in size and quality. He added samples of German kiln-dried beets, which looked black, hard, and uninviting; and beautiful, flexible samples of beets dried in the sun here. One fine sample was harvested, sliced, and sun-dried in ten hours at the Duarte, October 16, 1880.

Mr. Nadeau exhibited sugar-beet seed of fine quality; green sugar beets of the best quality; beets kiln-dried and sun-dried, showing the superiority of the sun-dried article; and samples of sugar made from green beets, from kiln-dried beets, and from sun-dried beets; the latter being plainly the best. The results of this year's work are most satisfactory in showing our possibilities.

PAVILION PERIODS.

Pasadena showed the only plate of strawberries at the fair.

Mr. R. R. Bryant informed us that he could guaranty his wife's jelly, for he said, "I raised the fruit and Sally made the jelly."

Woodhead and Gay exhibited a Vicar of Wakefield pear, 7⅝ inches in length, 15½ inches in circumference of the lower end, and 19 inches in longitudinal circumference.

There was a very creditable display of fruit made by Mr. R. R. Bryant of Los Angeles; artistically arranged and of the finest quality, it deserved its several premiums.

Mr. J. E. Hollenbeck's grapevine from the rancho El Molino one hundred and four years old and loaded with Mission grapes, attracted much attention. Its trunk was about eight inches in diameter.

A Justice's docket kept by Jas. Doniphan of Virginia, in which George Washington appears as plaintiff in ten suits, attracted much attention. Mr. Doniphan was the first school-teacher in Kentucky and the great grandfather of I. J. Frazee, the exhibitor.

AS OTHERS SEE US.

OPINION OF A VISITOR FROM THE EAST.

At the close of the children's performances, Gen. J. H. Shields, of Florence, took the stand to introduce a visitor, and said:

Ladies and gentlemen: Californians have plowed, planted, cultivated, harvested, and told an incredulous outside world of the results. We have among us to-day a stranger, from the far East, who was but is no longer incredulous, because he came, he sees, and believes. He proposes to make amends for his incredulity upon hearsay by telling you of his belief upon the sight of the horticultural displays which he has examined in this pavilion. I now have the pleasure of introducing Mr. Horace J. Smith, of Philadelphia. Mr. Smith has traveled much in Europe and America, was one of the managers of the Centennial Exposition, visited California in 1877, staying six months; returned in 1879 for a visit of eighteen months. He has a fine residence at George's Hill, Philadelphia, from which only the fine climate of Southern California entices him to absent himself.

On taking the platform Mr. Smith said: It seems proper that some one from a distance, who has no investments here, should give expression to his surprise at such an exhibition as this now before us. When Moses led the children of Israel up out of Egypt and through the wilderness, he was only permitted to take a view of the promised land and die. Those of us who have crossed the alkali desert, and looked down on the golden plains and been still more favored than Moses, to enter in like Joshua to see the fruition, can truly say this is a goodly land and wondrous in its possibilities.

It was my good fortune to visit this coast four years ago, fresh from centennial labors, when, through the courtesy of leading gentlemen, I had an intelligent explanation of the hopes, then entertained, of making this a great fruit and grain producing country. There was then enough accomplished to justify the Calebs who had come to spy out the land in going forward, though it was required that works should go hand in hand with faith. Coming again, the egg that was then hardly laid, we see now hatched—the bud then set has now blossomed and fruited. I wish that the horticulturists of the East, who swelter and freeze alternately, could but see what you have accomplished under more genial skies and more favorable climatic conditions. If, however, the mountain will not come to Mahomet, let me advise you to send Mahomet to the mountain; or, in other words, to send to one principal cities such a collection of your fruits and other productions as will amply testify to the value of your lands. There has been so much gushing writing in the papers about California—a gushing that was truly justified by facts, but was like taffy, in that it cloyed on the appetite—that now it is required that the realized products of the southern portion of the State should be seen and handled and tasted. At this moment we stand on the eve of great developments, greater even, I believe, than those which we have already seen. Capital is hastening to your borders with new lines of railroad, and relieving you, by competition, of dependence on the triumvirate who have created the line you know so much better than I that I need not characterize it. If the impulse given to this country by one line has resulted in such wondrous development, what may not be expected when these facilities are more than doubled; when the bars of high-priced transportation are let down to ground-floor rates? And here let us pause to give a tribute to that far-seeing engineer, John B. Weller, who insisted upon including the grand harbor of San Diego within the limits of the Union when the lines were run and the treaty made which returned this favored country from the Mexicans. Imagine how we all should feel at this moment if this safe harbor and future metropolis was ten miles within the boundaries of a foreign country instead of ten miles within our own territory.

And another tribute should be paid to the steadfast men who have fought a winning battle under adverse circumstances, and have compelled capitalists to see the merits of the harbor of the southern coast. And we must accord to New England the credit of being the brains of America, just as France is the brains of the world, and though we are warned not to put our trust in princes, yet if there is any faith to be put in human nature, surely we may trust in the solid men of Boston. But France, too, is hastening to open up a new world to you; and as Mons. de Lesseps has bought the Panama Railroad, and Lieutenant Menocal has demonstrated the practicability of a Nicaraguan canal, a trans-isthmian canal in the near future is assured.

If the projectors of these lines could but see this exhibition, surely their confidence in their investments here would be strengthened. You could point them to the anomalous fact of apples and pears as large and luscious and as fair as any, grown on unirrigated land, from apple pips that were but blossoms four years ago; to lemons grown alongside the apples, that are as smooth and juicy as the Mediterranean ever shipped to us; to chestnuts ripened on trees only six years old; to oranges, rich and luscious, from orchards that annually realize to their owners $1000 per acre; to strawberries as large, prunes as rich in flavor, pickled olives and olive oil superior to the imported. But time would fail me to catalogue the grapes, yielding ten tons to the acre, the grape-vines, 101 years old, now in fruit, and raisins shipped now by the carload; the flaxseed, plumper and weightier than grown elsewhere; the pumpkins, in weight approaching eight to the ton; the honey, limpid and delicate; almonds, walnuts, peaches, blackberries, guavas, peanuts, melons, and apricots. It is also pleasing to see the diversification of industries, and the manufactories springing up in your midst, for it is very certain that no great State can lean alone on agriculture. The canning establishment of Dimmick & Sheffield at Santa Barbara, should find others in every important district to emulate their success; and the mill in which Mr. Ellwood Cooper makes his delicious olive oil, find other competitors.

If I have but faintly alluded to the success demonstrated by this exhibit in horticulture, I can still less do justice to your grains—your unirrigated corn, and wheat, and barley.

These, however, need no words of mine, for are they not seen and known on the exchanges of the world, and do you not now feed multitudes, who, but for you, would be starved?

One other notable exhibit, however, deserves especial mention, and that is the display of mineral ores from Arizona. This region at your doors is so marvelously rich that the demand made upon your bounteous harvests has already advanced the price of your barley and hay twenty per cent. this season. Instead of having prices depressed by long transportation, and the losses incident thereto, you have an inter-State commerce growing as fast, almost, as your capacity to supply it.

These ores now here demonstrate how easily the debt of the nation can be paid when these coffers of nature are unlocked by the pick and the crowbar. Well has California chosen for her great seal the motto "Eureka," for here indeed is the El Dorado, the desired home for the race, where climate, soil, and other natural conditions are most propitious to health, wealth, and longevity.

DOTS.

Meyberg Brothers' superb exhibition of glass and silver plate.

W. H. Bowman's Duarte corn in ears, 12 inches in length and 9½ inches in circumference.

No department of agriculture was better represented at the fair than small fruits—the babies.

Seven feet 4 inches was the circumference of a Westminster pumpkin at the fair. Its weight was 201 pounds.

W. N. Telford of Gospel Swamp had at the fair a Glovin Mundi apple, which measured 15½ inches in circumference.

Los Nietos carried off the blue ribbon for largest single cluster of grapes. Weight six pounds, Rose of Peru variety.

J. Sullivan of Santa Barbara exhibited a pear of the Vicar of Wakefield variety, 6 inches in length and 14 inches in equatorial circumference.

Los Nietos showed a mammoth Pippin 15 inches, a yellow Bellflower, 11½ inches, and a white Bellflower, 10½ inches in circumference. And their quality on being tested was found to be of the best.

Woodland & Gay exhibited the two largest pears on the pavilion. The measurement of the largest is given elsewhere. The second measured 7 inches in length, 14½ inches in circumference of the largest part, and 17 inches in longitudinal circumference.

HORTICULTURAL FAIR.

CLOSING ADDRESS OF PRESIDENT SHORB.

Ladies and Gentlemen, and Members of the Horticultural Society: Another year has passed away and we have again reached the closing night of our third annual fair.

It has been my pleasant duty to bid you all the welcome at the opening nights, and to express the directors' thanks for the kind support given us by you all at the closing hour. It seems scarcely necessary for me to say to you anything regarding the good influence annual fairs have exerted throughout America in promoting the unparalleled success of the nation in her agricultural supremacy. This is universally recognized, and all public-spirited people therefore indorse agricultural fairs. I can not resist the impulse that induces me to refer to the difference in the times and conditions and my own feelings when we first opened our joint fair at the old railroad depot three years ago, and now. Then, sadness and trouble rested on all our land, and the heart of the nation seemed crushed beneath the weight of accumulative financial distress. All the great energy that once characterized us as a nation seemed paralyzed by the want of hope for the future. In every branch of business came reports of failure; thousands of prosperous and conservative men saw all the results of years of economy and labor surely departing from them; colossal fortunes, the savings of several generations, supposed to be as lasting as our granite mountains themselves, were dissolved into nothingness in a single night; the iron furnaces and forges stood still; and the happy hum of the busy loom was lost to our ears. That sound would have been a false accompaniment to the saddened and dirge-like notes of the times.

The savings of the mechanic, artisan, and ordinary laborer made in better times, were day by day depleted or exhausted, and in the place of an honest competency from honest toil, came pinching economy and oftentimes real want. Those great enterprises, begotten of wealth, energy, and genius, of which we felt so justly proud as a nation, were either abandoned or indefinitely postponed.

In one word, a great nation of great men seemed wrecked—lost in the universal gloom of doubt.

"No matter where; of comfort no man speaks:
Let's talk of graves, of worms and epitaphs,
Make dust our paper, and with rainy eyes
Write sorrow on the bosom of the earth."

Our daily newspapers and journals throughout the land, especially those issued from the great manufacturing centers, and which are more carefully read by all classes during the periods of great distress, had but little comfort to give to the idle hand and hungry appetite; they had but one advice left them to give to the mechanic; that he go to the field and farm; to try and earn there that living which he could no longer get by his trade in the cities. All this trouble and misery came from well-known economic causes.

From out of the great war and flush times following, from the flood of easy money, all classes went mad in the wild riot of wilder speculation, and even the conservative and careful farmer seemed to forget his polar star, *work*, *thrift*, and *economy*, as his only guide to success. Then came the inevitable result, and all that followed and has been described was the just punishment for the flagrant disregard of fundamental law governing all lands, nations, and people. And such has been the picture staring us in the face since 1874. Have I overdrawn or colored it? Are the shadings too deep for the little light on the canvas? I know the picture might be taken as a representative of inky midnight; moonless and starless as Byron's night, and yet such must be the faithful picture.

And now has come the glorious change. Not as a tidal wave, as if in mad desire to obliterate at once all traces of the unhappy past; but by slow and steady approaches to retrieve the past, and take strong hold of the prosperity grasped. From all the States in the American Union come the glad tidings of returned prosperity. In every branch of business, in every path of human industry, men are at work, satisfied and happy.

Those long-still tilt-hammers are again in motion, forging out the implements and machinery of commerce, trade, and agriculture. The iron furnaces so long standing black and sullen, are again illuminating our midnight, and pouring forth their fiery glare far out into the night, as national bonfires celebrating the return of happier times. Railroads established for years scarcely paying expenses, are now by the improved condition of affairs earning large sums of money, and swelling the incomes of their fortunate owners. Projected roads are building in all directions, stretching out their iron arms to grasp and carry forward the nation's wealth to the different points of shipment.

The woolen and cotton mills are all running on full time, employing more operators than at any past history of this country. Specie resumption has been reached with no financial disturbance; our bonds long held by foreign capitalists have, in great part, returned to us, and those which are still held abroad are worth more than any similar securities issued by European countries.

The gold coin shipped by us in the past to meet the interest on our bonds, and absorbing thereby much of our wealth, has come, like the bonds, back to us, and along with it millions of dollars are by each steamer pouring into the nation's lap. In vain may the banks of England and France advance their rate of discount; in vain may the statesmen of Europe bewail the departing commercial and manufacturing supremacy and prosperity of their loved countries; still the tide of great prosperity sets full toward America, and they are helpless to arrest it.

England, in her great wisdom, understanding well the situation, has sent forward able commissioners to examine into the resources of America; France, also, her scientific viticultural commission. The report of those two able commissions to their respective governments will carry dismay to their hearts, and well may it be so—they must report that they have examined a country rich beyond precedent and belief in all her agricultural productions, capable of supporting well a population as great as all Europe combined, and supporting them more cheaply than any other civilized country. They must describe a country so varied in its productions that when properly developed will supply to our population all they are now buying of other nations, and our surplus productions will still be sufficient to feed the world. Would that those commissions had the inspiring sight now stretched before me in this hall to-night. Could they not have then truly reported that within a radius of a few miles, geographically speaking, they saw in magnificent perfection, gathered in one hall, the productions of all Europe combined?

And now let us examine into the great potential cause that has wrought the wonderful change in the times described as existing four years ago, and the degree of prosperity now recognized and enjoyed by all. Is this remarkable change due to any psychological cause difficult to analyze or impossible to fathom? Has this prosperity we see now on every side of us sprung, as Aladdin's palace, into all its fullness of glory in a single night? Is it due to some lucky chance, or is it due to the same influence that underlies the greatness of every country; that has formed the keystone of the arch on which has rested the life of empires in the past, and without which none can hope to live in the future?

Look around this hall to-night, my friends, and you will see presented to you that potential agent that has made us again a prosperous nation; that has turned all our sorrowing into happiness; our dull despair into glorious hopes; our common country into the granary of the world.

No thanks are due to our diplomacy or state craft. No thanks are due to our mighty statesmen, of wrinkled brows and thought-lined faces. No thanks are due the manufacturer or merchant, bankers, brokers, railroad managers, or capitalists—but all thanks and credit are due to the "statesmanship of the plow" and the stubborn force of its results. The brain and muscle that have guided that implement have given us all we rightly boast of to-day.

From the soil and its successful cultivation springs all our wealth, excepting the treasure taken from the mines. In the days of great prosperity this fact seems to be forgotten; and only the commercial factors between created wealth and those who finally use and aggregate it are considered.

The legislator who may honestly try to do his duty, is too apt to think only of the good he may render his so-called business constituency, and leaves the real great interest of the nation—agriculture—unheard for. And so it is with our Congress and

the wise men directly in charge of the national affairs. They ponder long and seriously, talk political economy, manipulate wonderful schemes in national finance, banking systems, the army and navy, foreign policy, tariff, and God knows not what; forgetting, if they ever knew, that each new furrow turned up in virgin, generous soil, and made to yield up its latent wealth has more to do in solving these intricate problems than the statesmanship or genius of a million such men.

A dictionary setting forth the needs of the farming class should be the only one necessary for the statesman; the ordinary Congressman might, however, use to advantage oftentimes the common spelling book.

A nation where the great majority depends upon the soil directly for a living; where an easy and sure competency follows, as a matter of course, honest labor performed on the soil, requires little of the makers or administrators of the law; and but little space in the way of penitentiaries, houses of correction, or insane asylums.

Agriculture called into existence the first organized form of government, and the farming class therefore gave to civilization its first great impulse; and they have been and will continue to be the great conservative element of all governmental authority.

Wages, the product of labor, is the real capital of the country, and it is that capital on which depends our future and the perpetuity of American institutions. Where wages are derived principally from the soil, and more especially from the farm owned by the man who has made the wages, you can consider that country safe—free of communism, free of internal revolution, and in but little danger of foreign invasion.

And now leaving generalities, the results accomplished by agricultural success, I desire to call your attention to the magnificent exhibition of what labor expended on our soil has accomplished for us of Southern California.

Verily, "a land of corn and wine, a land of bread and vineyards, a land of oil olive and of honey," is in our possession.

Here are brought together in magnificent profusion the most perfect specimens of nearly all the productions of the temperate zones, with equally as perfect ones of the semi-tropic and tropic, grown side by side within the inclosure of a single homestead. Does not this assertion, proved by the evidences before you, convey in itself a volume of meaning? Do you know of any other country that is capable of growing side by side equally well the orange, lime, lemon, and olive; with the apple, peach, apricot, and nectarine; where the yield of wheat is up to the highest standard, and in corn surpasses the world?

Look at the Ceres exhibition behind me, with its shafts of golden grain, radiating from the central figure as the glorious rays of light from the setting sun of the western world. This is not an exhibition suggestive only of our future possibilities in the grain-producing line, but the collection represents thousands of acres of wheat, barley, oats, and rye, all of which have produced magnificent yields—second to no other county or counties in this State. Two large flouring mills, constructed in the last two years, are running night and day on home-grown wheat, furnishing as excellent flour as represented by any brand in the State. Vessels are loading at Wilmington, on foreign account, and all our warehouses are groaning under the weight of accumulating grain. So much for the "Cow Counties." Will our friends from the metropolis note what I have said, and then drop from their vocabulary this "cow county" talk forever?

We have so long and deservedly enjoyed the reputation of being the best corn county in California, that all I think necessary to say regarding this great wealth-producing grain, is that we this year surpass ourselves. We produce more corn to the acre than any other country in the world, with less work and with less expense. To tell the truth of our squash and pumpkins would jeopardize any man's reputation for veracity, and hence I withhold it. Our root crops, together with tobacco, hemp, flax, sorghum cane, and sugar beet, rival the cereals in their perfection.

In our horticultural wealth, in our viticultural productions, I believe I am hazarding no successful challenge when I unqualifiedly assert that we to-day surpass the world in our variety and excellence of all.

Here you may see oranges, though ripe and ready for market in January last, have remained upon their trees in all their beauty and perfection, and can be as successfully transported now to our Eastern markets as when first ripe in January. Such being the great peculiarity of our orange interest, why talk of, or for a moment consider, any danger of over-production? We never can or will be able to supply the demand awaiting us, on the completion of the Southern Pacific Railroad, for oranges, lemons, and limes. In olives and olive oils, we have the nations of the world as consumers. They are already appreciating our olive production, which should be now a thousand fold greater than it is to supply the demand created. What I have claimed for our other productions applies equally to peaches, pears, quinces, apricots, and small berries.

When I come to consider the apple exhibition, I am absolutely at a loss what to say. I can not realize how it is possible here in Southern California, side by side with the orange and citrus family fruits, should be produced the best apples of every variety known to pomologists, common to the northern, middle, western, and southern States. In size, firmness, keeping qualities, and flavor, all the varieties seem perfect. This staggers belief in the evidences of our own senses; and yet here is the proof, from which we can not escape.

Our wine, brandy, and raisin interests are daily growing into magnificent proportions and world-wide favor, and in this interest alone we have a wealth scarcely possible to represent in figures. Long have we struggled, faithfully have we worked, to place this grape interest where it is to-day, and now comes our reward. All fears for the future have passed away. Our wine trade is as firmly established as it was in France and Germany in 1875; and the day of cheap grapes has passed away never to be known again. A few years more, and on the imperial tables of Europe will we find, side by side with Johannisberger, Tokay, and Chateau Lafitte or Margeaux, the California brands of wines, equal in flavor and as high in price.

I sincerely hope the good results of this fair, far surpassing anything of the kind heretofore held in Southern California, may last long after to-night. I hope the exhibition will stimulate a generous rivalry between the different counties within this district, and that you will return to your homes determined that next year's labor and care shall enable you to produce and exhibit productions even better, if that were possible, than at this fair.

We have a glorious country, my friends, one of such wonderous wealth and possibilities that if we but do our part, and supply the only element wanting, and that is work, work all the time, we are sure to achieve a prosperity greater than ever before known, and upon that prosperity build a glorious civilization as broad as our mountains' bases and enduring as time.

This is no idle prophecy, made to please you for the while; it is predicated on historic results, accomplished by other nations and countries who have had but a tithe of our advantages. Examine as you may this assertion; consult history; read the statistics of other places; talk with whom you may; select any authorities you will, and you will then be ready to sustain me in this prophecy. The delta of the river Nile sinks into insignificance when compared to this country; and yet Egypt has sustained herself on its productions for a period of nearly seven thousand years, despite her faulty government.

What we will make of this God-favored land depends upon ourselves. Nature's God has lavished the great blessings of soil and climate upon us, has given us more advantages than any other country in this wide world possesses, and now only asks of us to do our duty; to complete the work. You will pardon me, I hope, for quoting myself when I earnestly beg of you to remember that at last the glory, success, and happiness of a people depends more on the proper use they make of the resources that subserve the ends of civilization and progress than upon the abundance of the resources themselves.

Owing to the lateness of the season, the date for holding the Citrus Fair at the Horticultural Pavilion has been set for the week commencing Monday, April 4, and ending Saturday, the 9th.

Now is the time to subscribe for the SEMI-TROPIC CALIFORNIA, only $1 50 per year.

Southern California.

SAN DIEGO.

In point of neatness and artistic arrangement the San Diego display was unequaled in the pavilion. Considering the disadvantages of shipping, the fresh appearance of even the more perishable fruits was certainly remarkable. The decorations were admirably chosen, being chiefly smilax, which needs no renewal, and cut flowers easily replaced.

The display of jellies, by Miss Lizzie Parker, forty-one kinds, neatly put up in glass, added greatly to the beauty of the exhibit. The glass labeled "Guava" had an added interest from the unusually fine display of that fruit, and suggested to a correspondent a train of reflections which will be found elsewhere in our columns. The oranges from June blossoms served to further puzzle Eastern visitors, and were pronounced excellent by good judges. Guavas, pears, quinces, peaches, figs, almonds, peanuts, pomegranates, lemons, limes, oranges, blackberries, Japanese persimmons, grapes, olives, apples, of countless varieties, each faultless of its kind, and lavish in quantity, made a collection which was hard to equal for beauty and variety. The specimen branch of *Amygdalus amara*, or bitter almond, of medicinal and culinary value, certainly indicated a production in paying quantities. Plates of White Nice and White Malaga grapes were justly decorated with blue ribbons, and premium badge for best three bunches of grapes of one variety also adorned the San Diego table, being awarded to Mr. Kimball on three clusters of White Muscat. As usual, the Kimball pickled olives were the center of an epicurean circle, each individual who composed it being lost in amazement that olive culture, the profit of which needs no further demonstration than has already been given, has not a larger and more enthusiastic following. The ripe olives, which require a stronger brine for preservation, after freshening a little in clear water, are unsurpassed for richness and delicacy of flavor, being more palatable as well as more digestible than the imported fruit.

San Diego county was awarded the society medal for best display of fruit, and it was richly deserved, the award was in accord with the commonly expressed opinion of spectators.

San Diego is about to realize her hopes. The whole country knows that that city was looked on as the future gate city of Southern California and Arizona. Now the Boston gentlemen who compose the syndicate in charge of the Atlantic and Pacific Railroad, have entered into a contract to make that city an ocean terminus of their road. In earnest of their intention to fulfill their contract, they have invested hundreds of thousands of dollars in property in and around the bay. The importance of these facts is not confined to San Diego, but is common to all Southern California, if not to a larger territory. A competing Pacific port and a competing transcontinental railroad are not matters of minor or local significance. The action of John B. Weller in insisting on San Diego bay being included in the grant to the United States was not less a great thing for San Diego in putting it under good government, than a good thing for the government in giving it a good harbor at a point where one was much needed.

Let the reader imagine, if he can, the future of a spot that can make such a display of products as San Diego had at the fair, has such a harbor, and such a back country as Southern California and Arizona, and is under the management of such men as the Kimballs, the Higgins, the Ashers, the Swans, and others. Their enterprise, intelligence, and ability make a spike team that will soon market the treasure these gentlemen have mined and guarded during ten years of alternate hope and despair. They deserve success and they have it.

PASADENA.

To say that the exhibit of Pasadena fruits and flowers was very fine, is to fall short of the verdict of the committee to award the special premium for best exhibit of California fruits. They say it was the finest.

As a central figure, a large set of shelves in the form of a bee-hive, rose to the height of ten or twelve feet. The form was suggested, no doubt, by the co-operative character of the settlement and of the exhibit. This hive was covered with all manner of fruits of temperate and tropical zones. Surrounding this were large tables which added to the display in quantity and quality. Here were oranges, lemons, limes, peaches, apples, pears, quinces, plums, grapes, pomegranates, strawberries, figs, Japanese persimmons, raisins, dried and canned fruits, including besides above varieties, apricots and nectarines, jellies of many kinds, English walnuts, almonds, squashes, pumpkins, corn of several varieties, amber sugar cane, beets, Lima beans, Mrs. Rosenbaum's premium bouquet of cut flowers, and no doubt other things which have escaped mention.

These fruits were all produced on high and dry mesa lands without irrigation, which were supposed a few years ago to be utterly useless except for sheep pasture. These lands have been brought into a state of very high cultivation; and all fruits were at first watered. But it was observed by some that trees which were supplied with water by cultivation alone, produced fruit of more body and more pronounced flavor. And so it came about that irrigation of deciduous fruits and grapes has been entirely discontinued at Pasadena and some other places. And it has come about at the same time that Pasadena fruits are very much in demand at slightly advanced prices in the market of Los Angeles.

This difference in the flavor of fruits grown on high mesa lands, and the fruits of low moist lands, where standing water can be obtained by digging from six to ten feet below the surface, is shown by the disposition made by discriminating wine-makers of grapes from the high and the low lands. Those from the warm mesas are found to be sweeter and heavier, and are consequently used for making sweet wines, such as Angelica and Port, while grapes from moist lands are used for light and sour wines. Something like the same difference is observable in the fruits of the same localities. Heavy irrigation has much the same effect as lowness of land. Great moisture in the soil has its advantages in other directions which fully compensate for any lack of flavor of its fruits.

Without incumbering this statement by giving names, some of the most noticeable features of this magnificent display may be mentioned. There were quinces of the apple and the orange varieties. The latter ripen and soften into a yellow, mealy fruit, much finer than the apple variety, while the apple variety reaches a better size. An apple quince measured 14½ inches in circumference, an orange quince 18¾ inches.

A Mammoth Pippin apple from Pasadena measured 14½ inches in circumference. Another sample measured 14¾ inches in circumference. A Yellow Bellflower measured 11 inches. A Smith's Cider, 12 inches. King of Tompkins County 11½ inches. Pumpkins from 124 to 150 pounds in weight.

The unlimited amount of Yankee pluck that has converted a sheepwalk into a beautiful garden of the Lord, and the enterprise which makes a collection of its choicest fruits and sends them to a fair, and captures the unanimous opinion of the committee to award the special premium, can but be admired. A neighborhood of such industrious and enterprising citizens makes a home in which to live is a perpetual delight.

ORANGE, SANTA ANA, AND TUSTIN.

The people living east and south of the Santa Ana river made a joint exhibition at the fair, which did credit to that important part of Los Angeles county. The palm has always been given up to the Gospel Swamp on corn and pumpkins; and the only fear felt by some other sections is that this region may yet win the laurels in branches of agriculture which have been claimed for other sections. Their display of apples, pears, oranges, lemons, limes, potatoes, wheat, corn, pumpkins, and other products shows the widest scope, and their products were all up to a very high standard of perfection.

The big pumpkin weighing 211 pounds was especially noticed by all visitors. It bore a legend as follows: "I am from Tustin city. Where are you from? I weigh 211 pounds. How much do you weigh? I was raised on orange land without irrigation." Sweet-potatoes also were shown which measured 15 inches in greatest circumference, and 24 inches in smallest, and 24 inches in greatest circumference. What limit is there to the possibilities of such a country? The number of people that can be supported from an acre of such fertile and such versatile land in its highest condition of cultivation must yet turn out to be large.

FLORENCE.

This section of fertile and moist soil is so well and fully represented by its distinguished citizen, General Shields, that but few words of praise from us, a few simple facts in regard to their exposition at the fair, must serve our reader's purpose. The brilliant colors of the apples of the Florence display were universally remarked by visitors. They ranged from bright green through yellow, pink, striped, to flaming red, and always tempting. Florence showed twenty-one grapevines, swinging from the ceiling and stretching out their branches like giant tarantulas; showing 40 to 50 pounds of grapes to the vine. Just count that up, at 1000 vines to the acre, and $22 per ton for grapes, and you have a total annual yield of over $400 per acre. These vines were not irrigated, and are better without artificially applied water. If the ills of too much irrigation were recorded at length, the record would show many failures to realize a golden dream, and the dreamers never knew the cause. Florence pumpkins are not to be lightly regarded, for they weighed from 201 pounds downward. Sugar-cane, corn, pears, and many other fruits whose naming would be only a repetition of the exhibits of other places, graced the tables of this flourishing settlement.

LOS NIETOS.

About Downey City is a fine country of moist land, where a very few feet of digging below the surface brings you to permanent water; where the roots of trees and vines soon find all the water they can ask; and even such fast-growing products as alfalfa thrive excellently without irrigation. This section of country brought into the fair a very fine collection of apples, as large as any exhibited at the fair, and as luscious as palate could wish. And Los Nietos furnished English walnuts, which we are compelled to pronounce superior to any we have tasted this year. Their trees, too, have not the habit of shy bearing, which renders their culture profitless in many localties. Mr. O. P. Passons is understood to have made them quite profitable. We will take pleasure in publishing the facts, if he will furnish them.

Los Nietos is an old Spanish settlement, and that means abundance of water and rich soil. It means, under American cultivation, 75 to 100 bushels of corn to the acre. It means 10 tons of alfalfa hay from five crops per year. It is the land where "the hand of the diligent maketh rich."

LOS CERRITOS.

A ranch near Wilmington, bearing the above name, has been partly subdivided into ten and forty acre lots, which are to be colonized and sold to settlers under the name of The American Colony. Mr. W. E. Willmore is the manager of the matter, and he had the good sense to show some of its products at the fair. Up to this time these have been mainly grain and vegetables. There were large, fine potatoes, which run in the hill six to seven and a half inches in length, and about the same in the least circumference. There was corn in ears nine to twelve inches long, large, and of deep kernel, and the culture of wheat, which is a rising industry in Southern California, is beyond its experimental stage on the Cerritos. The wheat exhibited was long, well filled, and free from rust.

We wish the proposed farming colony success, and that right speedily.

SANTA BARBARA AND VENTURA.

These two counties, somewhat remote from Los Angeles city, were not as fully represented at this fair as we hope they will be next year. They are two important links in the chain and are necessary to the district. All they displayed was creditable. Messrs. Kellogg and Sewell of Santa Paula exhibited some fine cream cheeses. These gentlemen inform us that a gallon of milk makes a pound of cheese, and that it realizes to producers 12 to 14 cents per pound. They are making some small five-pound cheeses, shaped like a loaf of bread, which are becoming popular, because they cause less loss by drying out, and families can use up a cheese of the small variety.

Mr. N. W. Blanchard, of Santa Paula, exhibited some fine Odessa wheat, which threshed from forty to fifty-five bushels to the acre. He informed us that one man at Saticoy sowed one ton of Odessa wheat on forty-three acres of land, and reaped an average of thirty-one centals or fifty-one and two thirds bushels per acre.

Col. Hollister, of Santa Barbara, sent fine English walnuts, and Mr. Dimmick some fine canned fruits, beautifully labeled. Mr. Ellwood Cooper showed some fine samples of olives and olive oil. The Ventura refinery sent some very clear and light-looking kerosene oil.

The multitudinous duties devolving on the editor of the SEMI-TROPIC in connection with the fair, prevented us from giving as much attention to this number as we should wish. The honor of editing the fair edition belongs to Mr. D. M. Graham, who has given his time and attention to "writing up" the exhibits. It would be next to impossible for him to give each and every one the due credit that the special exhibits deserve, and not miss any. It is impossible also to write at length in one number of our paper about the different localities, as fully as we would desire, but we will make amends in our future editions for any short coming in this number.

Mr. J. Brown, whose fine display of grasses at the fair last month attracted much attention, will stop at Los Angeles for the present. He is a thorough and practical landscape gardener; has the agency for ornamental designs for gardens and lawns; has a large collection of native grasses; also grafted Japanese persimmons for sale cheap. Will go to any part of Southern California. Office at Brown's Anaheim House.

ARIZONA AT THE FAIR.

The fortunes of Southern California and Arizona are so blended that it is impossible to distinguish between them. They are mutually dependent. The mineral wealth of Arizona needs the wealth of grain and fruit and meat of Southern California, which in turn needs the precious metals. The most fortunate part of this convenience of exchange is that it is in actual progress. The amount of produce shipped to Arizona from Southern California during the last two years has never been summed up, but it is something enormous, and the Territory is good pay. Our interests are mutual, and are so understood and felt. Arizona workingmen are largely from Southern California, and many of its capitalists hail from here; while many Arizona capitalists from the East establish homes in Los Angeles, which is destined to become to that new and very productive mining country what San Francisco has been to the young Comstock lode.

Appreciating the situation, Messrs. Peel and Kimball collected with great care specimens of ore amounting to about

THREE THOUSAND POUNDS,

From about three hundred mines in and about Tombstone, Arizona, and brought them to the Pavilion for exhibition and explanation. These ores assay from $100 to $25,000 per ton, and the collection is worth, as ore, several thousand dollars. It proves of great interest to the visitors at the fair. Chlorates and carbonates of silver predominate, and many of them show that the work of reduction would be very easy. Some of the carbonates are so rich that a little rubbing with a hard, smooth substance, gives them the polish of silver.

Among the most prominent of the mines represented by these enterprising gentlemen are the Tough Nut, Good Enough, Grand Central, Bird Center, Empire, Lucky Cuss, Sunset, Silver Cloud, Bunker Hill, Western Union, Delaware, Tranquillity, Yellow Jacket, and many others whose names are becoming as familiar to Los Angeles ears as have been the names on the Comstock to residents of San Francisco.

Messrs. Peel and Kimball intend to take this collection of ores on a tour through the Eastern cities. This will bring the mines of Arizona to every miner's door, and the already great and growing interest in them felt by Eastern capitalists will be augmented.

When it is remembered that these mines are only a small proportion of the mineral wealth of Arizona, an idea is formed of the importance of that territory which is now being opened to the world by two competing transcontinental railroads. And its importance to Southern California is daily growing as its wealth comes to light.

We will increase the value of the SEMI-TROPIC CALIFORNIA greatly for 1881 over the last year; and we have the credit of now publishing the best horticultural paper on this coast.

Apiary Department.

CONDUCTED BY N. LEVERING.

MINUTES OF SOUTHERN CALIFORNIA BEE-KEEPERS DISTRICT CONVENTION.

Los Angeles, Oct. 20, 1880, 10 o'clock, a. m.

Southern California Bee-Keepers District Convention convened at Good Templars' hall. The President, C. J. Fox, not being present, Mr. J. S. Harbison was elected temporary chairman, and N. Levering Secretary. Mr. Levering stated that the object of the meeting was to give an opportunity for exchanging ideas, and the more thorough organization of the honey producers. The boundaries of the district were decided to be the same as the boundaries of the Fourth Congressional District. On motion, the chair appointed a committee on programme for business of convention, as follows: L. S. Butler, Frank Flint, and C. N. Wilson.

Adjournment until half past one P. M.

AFTERNOON SESSION.

Meeting called to order, J. S. Harbison in the chair.

The committee on programme reported business as follows: First, election of officers; next, reading of address, written by President C. J. Fox; third, subjects for discussion.

The election of officers resulted as follows:

President, J. E. Pleasants, of Anaheim.

Vice-Presidents, J. S. Harbison, of San Diego; A. W. Hale, of San Bernardino; J. W. Wilson, of Pasadena; R. Wilkins, of Ventura; Frank Flint, of Santa Barbara; G. M. Harington, Visalia.

Secretary, J. A. Haskell, of San Fernando.

Corresponding Secretary, C. J. Fox, of San Diego.

Treasurer, E. F. Spence, of Los Angeles city.

Mr. Flint was called upon and read the address of C. J. Fox, after which a motion was made and carried that the address be placed on file and furnished for publication.

An opportunity for joining the association was then given, the membership fee being 50 cents. Twenty-three persons joined.

Next in order was the reading of essays. Mr. Gilchrist read an article on floriculture, at the same time exhibiting specimens of the different plants.

A vote of thanks was returned to Mr. Gilchrist, and a motion carried to place the essay on file for publication.

Mr. J. W. Wilson was called to the floor, and read an article on "A Step Backward in Apiculture."

The meeting adjourned until 9 o'clock, Thursday.

OCTOBER 21.

Meeting called to order, President J. E. Pleasants in the chair.

Mr. Barber's article on apiculture was read and placed on file.

Dr. Galey spoke for some time on various subjects in apiculture.

Mr. Harbison gave some of his experience in the bee-business in California, and gave the association many points of interest, both in the management of the apiary, and also in the plan of marketing honey. He thought the mode of putting up honey for different markets should be in different packages.

He placed great stress on the proper curing of extracted honey, and in having comb honey in straight full combs and neat, clean frames.

Mr. Levering read an essay on the industry of honey producing.

Recess till 2 P. M.

Meeting called to order, the President in the chair.

A request was carried that Mr. Harbison should write the next annual address to the Bee-Keepers District Convention, with Mr. Flint as alternate.

Mr. Levering had framed an act to be presented to the legislature, "after such modifications as the convention saw fit to make," for the suppression and extermination of foul brood. The same was referred to a committee, with power to act in the matter without further instruction, the committee being C. N. Wilson, L. S. Butler, N. Levering, and J. E. Pleasants.

Adjourned till Friday morning.

FRIDAY, OCTOBER 22, 10 A. M.

Meeting called to order, J. E. Pleasants in the chair.

The subject of freights on packages was discussed, and left to local organizations.

On request, the Secretary read an article in the *New York Argus*, entitled "The Stingless Honey Bee."

On motion, the executive committee was authorized to co-operate with the vice-presidents of the different counties in gathering statistics relative to the present crop and also of the crop of 1881; the vice-presidents reporting, from time to time, to the committee, and they in turn reporting the aggregate to each of the vice-presidents. An invitation was extended to all apiarists to communicate anything of importance to the committee.

A vote of thanks was then tendered to the officers of the association for the courteous and impartial manner of conducting the business of the session.

The meeting then adjourned until fair week, 1881. J. A. HASKELL,
Secretary Southern California Bee-Keepers District Convention.

ADDRESS

By Charles J. Fox, President District Bee-keepers Association:

Fellow Bee-keepers: It has been found by experience that, in most occupations, co-operation is exceedingly useful, and of late years almost a necessity. It is especially advantageous to farmers and producers. There are fruit growers', wool growers', wine growers', and other associations, the members of which meet from time to time for consultation and to arrange plans for mutual counsel and assistance, and have held conventions at different

During the past five years, the bee-keepers all over the country have formed county, State, and national associations, times and places, where much good has been done, by exchange of ideas and opinions, and by comparison of different methods of managing bees, securing honey, and marketing it in the best way.

Keeping bees and obtaining or, as we say, raising honey have been practiced by people in all ages and countries, and at times in the past honey has been a more important article of food than now, when so many other articles are used as sweets, few of them, however, so healthful as pure honey is.

But past history does not inform us whether bee-keeping was ever pursued as systematically as it has been during the last five years. All of us can remember the commencement of the present era of scientific bee-keeping and its wonderful progress from small beginnings to its present position, as one of the important industries of our country, and especially of Southern California. San Diego county, where I reside, has the largest number of bee-keepers, and produces the largest amount of honey of any county in the State, or perhaps of the same population in the world, and I may be pardoned for referring to its progress as an illustration. The business commenced in 1871 by Messrs. Harbison & Clark bringing there one hundred stands of bees. There had been a few there before, but scattered about, very little attended to, and only used for home consumption. This was the first attempt at establishing an apiary or making a business of bee-keeping. At present Messrs. Harbison & Dowling are owners of over three thousand stands of bees, and the total crop for the present year is 110,000 pounds net. Harbison & Dowling have shipped to the various markets in the Eastern States and California in the year 1880, 265,000 pounds gross, and have on hand yet to ship about 33,000 pounds gross, all comb honey, except about 2,000 pounds. In 1874–5 a good many others engaged in the business, and in 1878 there were over 20,000 stands of bees in the county, and the export of honey exceeded two million pounds.

The following figures represent, as nearly as I can obtain them, the condition of the business the present year: San Diego county had March 1, 1880, as returned to the assessor, 831 bee-keepers, 15,621 stands of bees, and has exported, including the amount now in store in the city of San Diego, 418,700 pounds net of comb honey, and 488,700 pounds net of liquid honey in barrels and cans. A considerable amount has not been brought in, and the total product will be about 1,000,000 pounds. I could not obtain exactly the number of stands of bees at present, but Mr. Harbison and I estimate it at from 24,000 to 25,000.

Santa Barbara county, by a report from Mr. Frank Flint, Secretary Bee-keepers' Association, had March 1, 1880, 31 bee-keepers, 1,757 stands of bees, and has pro-

duced for export this season 257,800 pounds of honey, nearly all extracted or strained. The number of stands of bees, as estimated October 1, is 3,655.

Ventura county, by a report from R. Touchton, Secretary Bee-keepers' Association, had last spring 70 bee-keepers, about 4,600 stands of bees, and has produced for export 700,000 pounds of extracted honey. The number of stands at present is estimated at 7,000.

San Bernardino county, by report from M. Segurs, Secretary Bee-keepers' Association, has now about 6,000 stands of bees, and has produced about 350,000 pounds extracted and 100,000 pounds comb honey.

Los Angeles county has not made a report of the condition of business for the present year, nor have I the figures of total export. I regret this, as it is one of our best counties, and for want of it I can not give totals for Southern California as I wished to do. I inclose letters from N. Levering, Secretary Bee-keepers' Association, and also letters from the other secretaries mentioned above, which, if read, will be found to be very interesting. The totals from four counties show that there are at present over 41,600 stands of bees, and that the product the present year is about 2,315,000 pounds of honey, or 1,157 tons. The return from Los Angeles county would very much increase these figures.

An industry that has grown in so short a time to such large proportions, naturally is not so well conducted as one that has been of slower growth. Thus we see a good many different kinds of hives in use, different methods of handling bees, of taking out honey, of packing, shipping, and marketing it, and a good deal of complaint among dealers, of the poor condition it is received in for market, and among producers, of unremunerative prices.

I leave the question of management of the apiary to others more able than I am to discuss it; but, having had considerable experience in marketing, will mention a few points that may be studied with profit. For foreign shipment, a well-made, iron-hooped barrel, holding not over 15 to 20 gallons, is the safest, strongest, most easily handled, and most economical package. New tin cans, holding 60 to 100 lbs., and well boxed, are very good, but more costly, and not so acceptable to the European buyers. Small cans, of course, suit the Arizona and other retail trade. It is a mistake to put good honey in old tin cans. The loss by leakage, breakage, and unattractive appearance, more than makes up for the saving in first cost. As to comb honey, the Eastern dealers inform me that small packages sell better than large ones, though I know many think otherwise. At all events, they should be strong, neat, and well packed. A great deal of honey loses, not only in weight, but in price, by being badly packed.

In regard to shipment, our railroad freights are so high that we can scarcely ship overland in competition with Eastern producers and realize any profit, but ocean freights are cheap though slow, and the saving is of itself a good profit to producers.

It is a mistake to overload the market of San Francisco while there are so many others, for it causes low prices and general disappointment. The growth of our industry has been greater than the demand, and every one interested should do all he can to make more markets, and increase the consumption of honey. A good deal has been done in this way. Two years ago I made direct shipments to Europe to the amount of over 150,000 lbs. Although it did not bring as good a price as I expected, yet I learned that but for this and other shipments, the price in San Francisco would have fallen far lower than it did, and would have been nominal.

More care and consideration of the interests of producers should be given by the railroads and other public carriers, and this can best be obtained by unity of action on our part. For instance, the through lines should be willing to guaranty through cars, for it is destructive to comb honey to have it transferred from one car to another en route, and I can see no reason why liquid honey in barrels or cases should be charged higher freights than syrups or other liquids. Some of the steamship agents refuse to take liquid honey on the excuse that it will injure iron ships by leakage—a very frivolous excuse, when acids and other articles of commerce much more dangerous are transported. If the railroads encourage the shipment of honey by reasonable charges and careful handling, they will have a larger share of the business, and aid in building up an important industry. And these matters concern every one of us, even if we sell our honey at our own door, for the large markets regulate the price of the smaller ones, and it is well known that in the long run all expenses of transportation come out of the producer, not the consumer.

Another great drawback in our business is dishonesty and carelessness on the part of commission men. I have been told in San Francisco by several commission firms, that they did not care to handle honey; they could not make anything on it, and that sales were slow.

Yet firms in the Eastern States and in Europe are desirous of the trade, send out circulars soliciting it, and are enterprising in seeking markets. Thurber & Co., of New York, one of the largest firms in the world, have made special efforts to secure and control the honey trade, and have established as an agent in London, Mr. Hogg, a man well posted in honey, and enterprising and active. If our California dealers would show more enterprise in opening markets and disposing of honey promptly, they would find it profitable.

Another evil is the too sudden placing on the market of our crop. It comes in mostly in two or three of the summer months, while the retail demand is not at its best till winter. Thus the effort of the producers to put their crop on the market as soon as made, results in low prices, for the wholesale dealers have to hold it for several months. The reverse of this has occurred this season. Producers have generally been disposed to hold on, and instead of a decline in price as the season advanced there has been an improvement. I learned during the past week from several points in the Eastern States that the crop there is much smaller than was expected, prices have advanced, and will probably continue to advance.

Another of the evils we have to complain of is an unjust system of tare. Dealers in California have arbitrarily increased the tare on comb honey, far above the weight of the package, although in Eastern States the actual weight of the case alone is deducted, as it ought to be, and it is the habit to add to the actual weight of the barrel a number of pounds for soakage, so called. This is not done with syrup, vinegar, liquors, or other liquids, and it is not just to do it with honey. The honey packages are more costly in proportion to the value of the contents than any of the other articles mentioned. A retail dealer can sell an empty honey barrel for more than the value of the soakage, and so lose nothing, while under the present system the producer pays for an expensive package, obtains nothing for it and is charged unjustly for soakage.

These are some of the evils and injustices of the present condition of our trade, and to remedy them requires united and earnest co-operation on our part. I should be glad to see this convention take some action in a business-like way against these and other evils which will no doubt occur to others present, always remembering that unity is strength, and that public carriers and wholesale dealers who would pay no attention to the complaints of individuals, have a wholesome respect for the energetic action of an organized association.

I have not indulged in the usual eloquence in regard to the "little busy bee," etc., for I believe in practical and useful talk and action, and having made these suggestions to the convention, I hope to see committees appointed and action taken on these and other subjects that will tend to systematize our trade, and make honey, as it should be, a staple article, always sure of a market at current rates, and producers and dealers in it treated with the same respect and consideration as with other leading staples.

Our January, 1881, issue—our Christmas number—will be a double number of sixty-four pages, and will contain all the illustrations of the last year. It will be a grand illustrated edition of Southern California. Every subscriber who has paid his subscription will be entitled to a copy; those who are not subscribers will be charged the nominal price of 25 cents per copy.

The subscription price, including our splendid premium map, is only $1.50 per year. Address Carter & Rice, Los Angeles, Cal.

A WALK ABOUT THE PAVILION.

Let us notice briefly the different things that caught the eye of the visitor to the fair as he took a hasty look around the Pavilion.

There was a display of wine from local manufactories.

The Pasadena exhibition.

The central fountain, whose basin swarmed with carp from Pettit's ponds at San Bernardino, and surrounded by flowers and plants from Winhold's gardens.

The sub-irrigation companies' display of fruits grown by their system.

The exhibit of fruits, grains, and vegetables from Orange, Santa Ana, and Tustin.

The San Diego display.

R. R. Bryant's premium display by one individual, and it was a nice one.

The contributions of Santa Barbara and Ventura counties.

A collection of most all kinds of productions from many places, including corn, pumpkins, and squashes from Pasadena, figs from San Diego, and magnificent chestnuts from O. W. Childs, Los Angeles.

The department of laces, quilts, and fancy work.

The office of the SEMI-TROPIC.

Dotter & Bradley's elegant furniture.

B. Coulter's dry goods display.

Charles E. Day's exhibit of pianos and organs.

Sherman & Hyde's pianos.

Cider stand.

The stage, with its background of Ceres, with rays of wheat in straw in striking imitation of the sun.

L. J. Stengel's exotic gardens.

Pumpkins of 125 to 211 pounds in weight, and six feet to nine and one half feet in circumference.

Show-case full of jewelry.

Popcorn stand.

Woodhead & Gay's universally admired collection of fruits of California.

Los Nietos (Downey) exhibit.

El Monte potatoes from Kimball Bros.

G. D. Compton's display of fruits and trees.

Peel & Kimball's Arizona mineral cabinet.

Flags of several nations.

Twenty-one grapevines from Florence, bearing their crop of about forty pounds each.

The New England Kitchen, in which the *élite* of the city of Los Angeles, dressed in the costumes of their grandmothers, served dinners and suppers worthy of their grandmothers.

Boots and shoes from the Queen store.

Fine harness from H. Heinsch's shop.

Dr. Wollweber's exhibit of crystals, sulphate of copper, and prussiate of potash.

Wm. Lacy, Jr's. scroll-sawed bird cage.

The art display.

More dry goods.

A washed fleece of wool in a large glass box.

Edward Scheiffelin's elegant cabinet of mineral ores.

The White sewing machine.

The Davis sewing machine.

A newly invented tailor's square and curve measure.

The Wheeler and Wilson sewing machine.

Antisell pianos and oil painting sign.

Children's temperance work, lemonade stand.

Florence fruit exhibition.

J. Begg's collection of wild oats and grasses.

Niles incubator and orphan chicken's home.

Niles excelsior fruit-dryer.

Honey, bees, hives, honey-preserved fruits, etc.

J. J. Harshman's lavish exhibition of cheeses, from his dairy near Compton.

Compton butter.

Champagne baking powder.

Kellogg and Sewell's exhibit of cheese from their dairy in Ventura county.

Los Angeles candy works.

Mrs. Wilson and Mr. Shorb's oranges from San Gabriel.

G. H. Peck's exhibition of flax.

Ventura carbon oil.

Santa Barbara olives and olive oil from Elwood Cooper's ranch.

Dinnick's canned fruits, Santa Paula.

Many other things to be found by the careful examiner for facts.

A synopsis of the entire exhibition to be gained by standing on the balcony over the stage, and taking a view of the entire hall.

The crowd.

AMERICAN COLONY.

The prospectus of the *American Colony*, of which a synopsis was given in the SEMI-TROPIC of October, and which was announced to appear in this number, will have to be delayed until the December issue, on account of the delay in getting the maps and plots that are being made to be published with the prospectus.

The American Colony has the promise of being one of the most successful colony enterprises that have ever been organized in California. There is not, in our judgment, a finer tract of land nor a more beautiful location for a settlement of farmers and fruit growers in Los Angeles county than the one secured for this colony. The lands are good and very productive of all kinds of grains and fruits, water is easily obtained and abundant for all purposes, and the title to the land is U. S. patent. The lands will be sold at very reasonable prices to colonists, and upon easy terms.

These are some of the inducements offered to settlers wishing to procure a homestead in the American Colony. For further information readers of the SEMI-TROPIC can apply to Chas. W. Davis, architect, Los Angeles, Cal., or to W. E. Willmore, Chicago, Ill.

Mr. Willmore has gone East, to Chicago, to hold a colony meeting, and will organize the eastern branch of the colony in that place, and will also visit a number of places in Illinois and Iowa in the interest of the colony.

CHRISTMAS

AND

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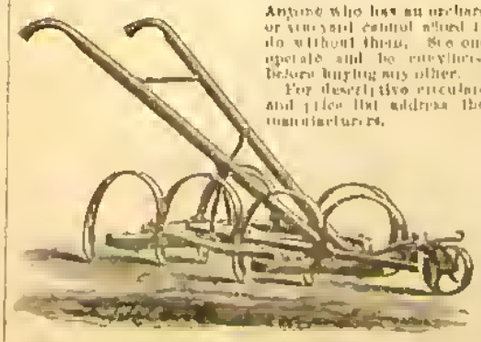

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HONEY.

For the first time in the history of the Horticultural Society, the honey interest of the southern counties was represented in the annual exhibition in such a manner as its importance and public interest demand. The attractive and interesting display under the auspices of the Bee-keepers' Association formed a center around which the apiarists literally swarmed, intent upon investigating the claims of improved machinery and testing the contents of the various frames and jars, any one sample of which seemed faultlessly clear and delicious to the uninitiated. One hundred and two varieties of honey producing flowers prepared by J. W. Wilson of Pasadena, formed a novel and interesting feature of this exhibition. The decorations of white sage were tasteful and appropriate, and the nectar itself, in jars arranged in pyramidal shape, clear as crystal, supported by frame after frame of comb honey, snowy and inviting, made a picture which can not be photographed except by the artist memory.

There was little in the display to indicate that the production this year is generally estimated at a half-crop, owing to hot winds in May, which stopped the flow of nectar. Prices are fair, and bee-keepers generally in good spirits. We present elsewhere articles of interest read before the Bee-keepers' Association, which was in session during the fair.

In connection with this department, Mrs. Benedict displayed samples of excellent honey vinegar, almost colorless, and above average in acidity; several samples of fruit preserved in honey with undeniable success, and three kinds of honey cake which elicited the warmest praise from those who were fortunate enough to secure a sample. It is urged, and very plausibly, that fruit cake made with honey is richer and retains moisture much longer than that made with sugar.

Altogether, bee-men have a right to be proud of the honey display in this pavilion. With a product that leads the world's market, a life which is too retired to attract any but the thoughtful and intelligent, and an employment that is both pleasant and profitable, we know of no class more enviable than the apiarists of Southern California.

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8th. All our Mills are fully Warranted.

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VOL. III. 1880. No. 12.

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FOR SALE.—Lands in different parts of the County and in the City of Los Angeles.

FOR RENT.—Several tracts suitable for wheat or barley; rentable for share of crops, or other rent, as preferred by the renter.

FOR GRAPE CULTURE ON SHARES.—Several tracts well adapted to grape culture for disposal, on plan of giving one portion in consideration of the planting the other in vines and caring therefor until in bearing condition. The lands last referred to are situate on the Tujunga Ranch, about 18 miles north westerly from Los Angeles City, and 5 miles from San Fernando depot, with abundant water for irrigation during winter and until the middle of June. Apply to

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SOUTHERN CALIFORNIA HORTICULTURIST.

Vol. III. LOS ANGELES, CAL., DECEMBER, 1880. No. 12

SANTA ANA.

A THRIVING TOWN WHERE SIX YEARS AGO THERE WAS NOTHING BUT A SHEEP RANCH.

The rapid growth of the southern end of Los Angeles county is not due to extensive advertising of its climate and resources. The section to which our article has reference, has no powerful land company to back it. Nor have the citizens made any extraordinary efforts to attract immigration thither for several years. Hundreds of tourists who come to Los Angeles city never hear of it, or, if they do, seldom take the trouble to visit it.

Should we strive to give a faithful description of what we saw during a tour of a week through this garden spot, we should be accused of misrepresentation and an attempt to delude immigrants. The only proper way for an intending settler to satisfy himself regarding our country is to travel through each section, and to carefully inspect it, not from the windows of the railroad car, but by visiting a large number of the improved farms, by conversing with their owners and learning their opinions, their methods and prospects.

Santa Ana is a young town, and is making a wonderfully healthy growth. Five years ago we saw but a few scattered ranches where now there are many hundreds. Then there were but half a dozen stores in frame shanties, now brick blocks which would be creditable in a town a quarter of a century old. No churches or schools then, now handsome edifices which speak volumes of the character of the settlers.

The Santa Ana valley for miles on every side of the town has been changed from a brown and somewhat dreary plain, to a garden region with cornfields, orchards, and alfalfa patches, the ripening deciduous fruit contrasting pleasantly with the still green semi-tropical fruit. Viticulture is becoming a prominent feature of the valley, and the vines that fall were loaded with the purple and luscious fruit, which is worth a mint of money to the fortunate owners. The Mission and Muscat are the varieties of the grape most generally under cultivation, but several gentlemen are experimenting very successfully with some of the choicest European vines. In one vineyard we observed thirteen varieties, the names of all of which we have not at hand. They included, however, the Zinfandel, Flaming Tokay, Berger, Charbonneux, Riesling, Muscatel, Muscat of Alexandria, Blanc Elba, etc., all in full bearing, and the fruit not nibbled in the slightest degree. The orange orchards are all looking well, and the trees are loaded with good-sized fruit. The soil in the neighborhood of Santa Ana requires but little irrigation, and one gentleman, Mr. Halliday, showed us an orchard which has not been irrigated for three years, and nearly all of the trees, deciduous and semi-tropical, are fairly breaking down with the fruit. The fruit-growers of Santa Ana are progressive, and every new tree, plant or shrub which is meritorious, finds a place in their gardens and orchards.

The apple crop has been immense, and prunes, figs, pears, quinces, and other deciduous fruits have done fairly well. The cereals, with the exception of wheat, have surpassed the expectations of the farmers themselves. We confidently believe that a finer corn crop, on an equal area, has not been grown in the United States. Potatoes, both Irish and sweet, have done well. Two hundred and fifty pound pumpkins are by no means uncommon, and thousands of tons of excellent hay have been stored away. The farmers' boys raise quantities of peanuts, equal to the best South Carolina variety, and the crop of English walnuts, although the trees are still young, is by no means insignificant. Vegetables of all kinds thrive in the rich mellow loam, and are plentiful and cheap. The climate is fully equal to that of any other portion of California, the sea air is bracing, and there are no malarial diseases. The town is principally built of brick, and has a substantial look. The stores seem to be doing a thriving business and carry large stocks of goods. The railroad depot is located half a mile from the business center, and Newport Landing about six miles.

We visited over one hundred families in the neighborhood of Santa Ana, and failed to find one person discontented with the place or its prospects. This fact will speak for itself. We do not think the people of Santa Ana desire to keep their climate and splendid soil all to themselves, but will extend a welcome hand to all newcomers, who have the means and enterprise to make themselves desirable acquisitions.

In our next will appear some notes of Orange and Tustin city. J. C. P.

Learned feeding means liberal profits; fowls scantily fed pay scanty profits; neglect means loss of what you do give them. As a rule, feed well or kill the flock. This should be the rule, for the results above named are as sure to follow as day is sure to follow sunrise.

HOW TO KEEP A HUSBAND AT HOME.

"Julia" writes us a long letter asking how she can keep her husband home nights. She says she has done everything she can think of to please him, but he will insist on leaving her alone each evening. We fear Julia doesn't make her husband's home pleasant for him, or he certainly would not go away. Now, Julia, you go down town to-day, and buy a keg of beer, placing it in one corner of the room. Strew sawdust over the floor, and put half a dozen coarse, wooden boxes about the room for spittoons. Hang a sheet across one end of the room, invite half a dozen of your husband's male friends to spend the evening. Then, Julia, you and your servant dress yourselves up in long stockings and night dresses, and when your friends have assembled with their cigars, pull aside the sheet you have previously hung up, and skip from one side of the room to the other on the tips of your toes, singing, "Tra-la-la-lef" and jumping as high as you can at every third step. This will prove a highly interesting exercise for yourself and servant, and prevent your husband from straying away. If your husband's male friends are married, invite their wives to assist you in the evening's entertainment. If this doesn't keep him home evenings, you'd better trade him off for a yellow dog, and keep the dog chained up.—*Old City Herald.*

OUR PLATFORM.

Leave undercutting to Cheap John companies and agents of the inferior grade. A Fireman's Fund policy means indemnity in case of loss, and therefore is worth a fair price. We can not compete with reckless, irresponsible, or bankrupt concerns, and never have pretended to. The company has paid the immense losses it has encountered in the past, because its business methods are legitimate, and its rates measured by the cost of the hazard assumed. As the agent is compensated by a commission on his premium receipts, it follows that every reduction of rates means a corresponding reduction of commissions. Therefore, the agent who yields to the demand for "cheap insurance," does so at his own expense.

Insure in the Fireman's Fund Insurance Company of California because it is a safe and reliable company. Its rates are as low as any first class company. It is a home company, and no better company does business East or West.

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In addition to renewing your own subscription, can't you get a new subscriber? Every person in Southern California interested in agriculture should have our paper.

Our Premium May.—We have bought the entire edition of Bancroft's map of California, Nevada, Arizona, and Utah, bound in cloth, and sold heretofore at $1 50, which will be given to every subscriber who pays the subscription price of $1.50, in advance. This offer holds good as long as our maps hold out.

Our next number, January, 1881, will contain 36 pages, and will be handsomely illustrated with the principal cuts we have published during the past year. This number will be the handsomest and finest illustrated paper ever published on the Pacific Coast. Only *paid-up* subscribers will receive this number, except at the nominal price of 25 cents. Send in your orders at once, or subscribe now.

EXCURSION PARTY.

Mr. Charles Smith and wife of Lawrence, Mass., are spending a few days at "Willow Dale," San Gabriel.

Mr. Smith left Boston November 10, with a party of about forty, over one half of which came with him to Los Angeles. They all express themselves pleased with their first impressions of Southern California, and most of them purpose to locate somewhere here in our mild climate.

With the present number we close the third year of the Horticulturist, the Semi-Tropic California having absorbed it one year ago. The past year has been a success, and as publishers we are more than satisfied. We have good reasons to congratulate the public on the work we have done, and which they have so generously sustained by their substantial aid and kind words of appreciation.

The Semi-Tropic California, started as an immigration paper, and afterwards consolidated with the *Southern California Horticulturist*, has been well received by the agricultural and horticultural world, and to-day takes rank as the foremost horticultural paper on the Pacific Coast.

As an immigration paper, we have done a grand work, by inducing many people to change their cold, bleak homes in the East, for homes of comfort in our genial and health-giving climate of Southern California.

The circulation of 5,000 copies each month of the Semi-Tropic has been done at the expense of a few, and the benefits have been and will be reaped by all. Shall we continue our Eastern circulation? Our home circulation is larger than any other agricultural or horticultural paper on this coast.

We take pleasure in acknowledging to whom the credit of our Eastern circulation is due, and herewith publish a list of the names:

Los Angeles County Bank.
Farmers and Merchants' Bank.
First National Bank.
Jotham Bixby.
Phineas Banning.
B. F. Coulter.
Brunson & Wells.
Gov. Jno. G. Downey.
Dollar & Bradley.
Dillon & Kuneaty.
Andrew Glassell.
J. E. Hollenbeck.
Harper, Moore & Co.
Hammel & Denker.
I. W. Hellman.
Heinzeman & Ellis.
Jackson, Kerckhoff & Cuzner.
San Francisco Estate.
L. Lichtenberger.
Walter S. Moore.
W. S. Maxwell.
H. Newmark & Co.
E. Naud & Co.
Dr. H. S. Orme.
Perry, Woodworth & Co.
Pacific Steamship Co.
Pond & Orr.
Preuss & Pironi.
T. E. Rowan & Co.
L. J. Rose.
Riverside Land Co.
J. S. Slauson.
J. De Barth Shorb.
Stearnes Rancho.
R. M. Widney.

HORTICULTURAL FAIR, 1880.

It gives us much pleasure to report the success of our Horticultural Fair as a grand exposition, showing the capabilities of the soil. Southern California can well be proud of her exhibits, as shown at this fair. We are also glad to be able to report a financial success as well. The results of the fair foot up as follows:

Total receipts		$3,927.55
Expenses of Fair	$1,185.05	
Premiums	605.65	
		1,790 70
Net proceeds		$2,136 85
Bills before Fair		120 00
Grand total		$2,256.85

The total amount that would have been left in the treasury would have been $2,256.85, but the debts of the previous year have nearly taken all this balance; but it is right to pay honest debts, and it gives us pleasure to be able to report money on hand at the close of the fair, after paying all the premiums and other expenses promptly, instead of reporting a deficit, and telling those who were awarded premiums that they must be content with the glory, that there is no money in the treasury.

What would have been much more satisfactory to us individually, would have been the appropriation of the $2,256.85 proceeds of the fair to the finishing up of the Pavilion; our success would have been appreciated much more.

The premium list of $605, and the $113 additional premiums of the Agricultural Society, increasing the premium list to $718 cash, is more money than any other society on this coast has awarded for agricultural and horticultural products. We are an agricultural people, and we would recommend the increasing of the premium list for the next annual fair to at least $1,000.

An Important Election will be held in our office, Tuesday, Dec. 21 (room No. 1, Baker block), by the members of the Horticultural Society, to vote on the proposition of uniting the society with the Sixth District Agricultural Association, the management of both to be under the Agricultural Society. We hope the attendance will be large, and every member present give expression to his views, and vote as he thinks the best interests of our community will be advanced. As secretary of the Horticultural Society it would not be becoming in us to advocate either side of the question, and so simply make the announcement, hoping that all interested will be present, and vote on the questions submitted.

By the request of societies and committees in other parts of this district, the Southern California Citrus Exposition will be held in this city at the Horticultural Pavilion, one week, March 14 to 19, inclusive.

SEMI-TROPIC

CALIFORNIA

AND

SOUTHERN CALIFORNIA HORTICULTURIST.

Devoted to Agriculture, Horticulture, and the development of Southern California.

Terms $1.50, per year, in advance, postage prepaid.

Address, CARTER & RICE, Los Angeles, Cal.

N. O. CARTER, GEO. RICE. } PROPRIETORS AND PUBLISHERS.

CIRCULATION - - - - 5000.

If this paragraph is marked, it means that your subscription expires with this number. If you wish to continue (and we hope you do), please remit $1.50, the subscription price and your name will be placed on our 1881 list. If not convenient to remit at once, drop us a postal, saying to continue, and at what time you will remit.

We do not wish to drop a single subscriber, but we will not enter up a single name on our new books, unless prepaid, or promise to pay very soon.

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THE CITRUS FAIR to be held at Horticultural Pavilion in this city, March 14 to 19, 1881, gives promise to be one of the finest fairs ever held in this country. Every county in Southern California has responded that they will take part in the exhibition. The premium list is being made up, and is very liberal. The highest award is for the largest and best display by any society, locality, or individual. The premium will be $100 in gold, and the Society Diploma.

ANAHEIM WINE-MAKERS are very busy, and report this the best year for vintage known in Anaheim for a number of years. The estimate of vintage this season is placed at nearly six hundred thousand gallons. Messrs. B. Dreyfus & Co., the largest vintners, will make 265,000 gallons. Messrs. Langenberger, Reiser, Korn, Hartung & Kroger will make about 30,000 each. There are thirty-four firms engaged in the business, and each are taxed to their fullest capacity to work up the large crop of grapes.

A PREMIUM of $100 will be given to the individual, society, or locality, making the largest and best display at the Citrus Fair to be held in the Horticultural Pavilion in this city March 14 to 19. Other liberal premiums will be given for exhibits in every class and department.

LOS ANGELES COUNTY has no equal as a dairy county, and yet butter is scarce in the market at 75 cts per roll (2 pounds per roll). Chickens thrive as well if not better here than any place in the United States, and eggs bring 35 cents per dozen readily. The price for butter and eggs is always good, and there is no danger of overstocking the market, with the vast mineral country at our doors filling up with thousands of people. Why do not our farmers keep a cow or two more, a dozen or two more chickens? The expense would be small, the profit large. Do it.

DEAD.—The *California Horticulturist*, published at San Francisco, and edited by the sprightly horticultural writer, Mr. C. H. Shinn, is dead. We regret the loss of our cotemporary, but have supposed for some time its life was only a matter of time. This leaves the *Southern California Horticulturist* the only horticultural magazine in the State, and we are vain enough to say we will try and fill the field. We ask the co-operation of every person interested in the progress of horticultural matters. Write us your practical experience. We *will pay* THE BALANCE *for all* MATTER *of real merit*. Subscribe and get your neighbor to subscribe.

Subscribe for SEMI-TROPIC CALIFORNIA. Only $1.50 a year.

FARM WAGES.—Col. Worthington, statistician of the agricultural department, has finished his annual report on farm labor and wages, from which the following facts are gathered. In the Pacific States and territories the wages for farm laborers, without board, is $26.62. The Northern States pay the monthly wages with board, $16.33. Vermont pays only $12.62. In the Southern States the prices range from $12.62 in Louisiana to $7.32 in South Carolina, the average being $9.60. There has been a general decline in wages since 1873, until last year, since when there has been a general advance in almost every section.

The average wages of labor engaged by the year or season, and which represents the steady and reliable force on the farms, was for the whole country last year, an average of $20.26 a month, without board. This year it is $21.75, being an increase of 7.35 per cent. The cost of subsisting the laborer for the average of the whole country, in 1880, is $7.17 a month, against $7.14 in 1879.

RUGBY, EAST TENN., established by Mr. Thomas Hughes, of England, is essentially an English colony, founded on the co-operative plan. Each member of the colony owns his own home, but all other kinds of business are on the co-operative plan. The laying out of the lands and village site is intended to make Rugby a beautiful place, as it is already naturally a lovely location, as we know from personal observation. The general surrounding and the poor quality of the land, it seems to us, will not make Rugby a very rich and thriving community. It will never come up to the English colony founded in Kansas by Mr. Grant.

WAREHOUSE RECEIPTS.—The case of the First National Bank against H. M. Bates on trial in the United States Court at Cincinnati, was ended with a verdict for the full amount claimed. The point in the case of public interest was the legal value of warehouse receipts. The bank had loaned $8,000 to one Grant, provision broker, and had taken as security a warehouse receipt of Bates for lard, containing a provision that the lard was to be delivered on presentation of the receipt. Grant failed, and when the bank called upon Bates for the lard it was found that it had been delivered upon the order of Grant. The verdict was rendered for the plaintiff under the instruction from the court that the warehouseman was bound to observe the condition of the receipt. Suits are pending upon similar receipts, amounting in the aggregate to $27,000.

MR. W. H. WORMAN has gathered from 25 acres of his vineyard this season 250 tons of grapes, an average of 10 tons per acre. From 50 selected vines in the same vineyard he gathered one ton, an average of 40 pounds per vine. The grapes are of the Mission variety. This portion of his vineyard is about sixty years old, and is located on the rich bottom of the Los Angeles river. *Herald.*

WALTER S. MOORE.

In this number we present an engraving of the residence of Mr. Walter S. Moore. The residence is one of the neatest and pleasantest, with extensive grounds, situated on Figaro street, near Washington.

Colonel Moore is one of our young men who, having cast his lot among us, and whose interests are extensive, is among the foremost of our public spirited citizens in any enterprise that looks to the improvement of our city. The SEMI-TROPIC acknowledges his generous support, and we are satisfied that every man who knows Walter S. Moore appreciates a whole souled, generous and honest man.

SLIPS AND CUTTINGS.

Cuttings of fuchsias, zonale geraniums, lover-lies, succulent leaved begonias, and many other plants, may be easily rooted in sand. Fill a flower-pot with coarse, gravelly sand, and stick in the cuttings close to the outer edge and quite near together. They are fond of company. Press the sand tightly around each one, then set the pot in a saucer, and soak it with water until it will hold no more. Put it in the sunshine, and keep it there every hour of the day that you can, but never let the sand get dry, or even approach that state. When a slip once withers, it is done for. In two weeks the cuttings should be well rooted and ready for transplanting into thumb-pots and good soil mixed with sand. They must be kept shaded for a few days. After the first watering they will need little, if any, until signs of growth appear. For the succulents that do not root so readily, the safest plan is to select a small shoot, break it half way off at the joint, leaving it partially attached to the parent plant. In this way a callus is formed, which is the first step in striking a cutting. In the meantime the slip is nourished from the main stalk. At the end of two weeks the cutting may be completely severed and treated as described above, or planted in sandy soil and shaded in the ordinary manner. Cuttings should be kept as even a temperature as possible. They will not thrive when subjected to extremes.

LIKE-MINDED excursions to the western States and Territories are attracting vast numbers of travelers. 4,000 of those visitors a day have been passing through Chicago. They come from all parts of the country to look at the valuable lands along the lines of the various land grant railroads.

THE *Herald* says that the stakes of Sweetheart and Sir Guy have been sold to John W. Mackay by Mr. L. J. Rose, price $5,000. In addition, the engagements of the fillies for the coming two years were reserved by Mr. Rose.

NATURE despises humble beginnings. What at first you might call an old stick in the mud may in time grow to be a beautiful willow tree shading the brook.—*N. O. Picayune.*

Illustrations.

WITH feelings "akin" to pride we call attention to the illustrations of this issue. Every number of our paper from the first has been illustrated, many numbers receiving complimentary notices of approval from the great papers throughout the United States.

This month we illustrate the buildings of the

LAN FRANCO ESTATE.

The estate of John T. Lan Franco is represented in our city by two substantial blocks, as shown in our illustrations. The growth of every town is an index to the men who pioneer the way, who have faith in a locality. Señor Lan Franco showed his appreciation of the then future metropolis of Southern California when he built the

and we are satisfied they will find it largely to their advantage to buy their drugs from this house. Messrs. Heinzeman & Ellis are so well and favorably known as skilled pharmacists and honorable business men, that it would be superfluous for us to call attention to their name, but for the large class of new comers who are moving among us, to whose attention we especially present this establishment.

DR. D. S. OSMIE

is one of our public-spirited citizens, a gentleman who has contributed liberally towards sending the SEMI-TROPIC to the people of the East, who want to know about Semi-Tropic California before making their homes among us. Dr. Osmie, an accomplished university scholar, and a graduate of our best medical institutions, put out his shingle as a practicing physician in this city over fifteen years ago, and has had

premises ever since the completion of the block. Nearly a quarter of a century in the manufacturing and importing of saddles, harness, saddlery-ware, leather, whips, and everything to be found in a first-class harness and saddlery establishment, is certainly the best of a guarantee and recommendation as to the worth of goods, and the fair and honorable dealing of Mr. Workman. In our Christmas number we will go more minutely into the details of this house, an establishment that is an honor to our city.

We shall also give attention in our next to the other occupants in this block. Mrs. Ponet, the pioneer in the millinery business in this city, and the recognized leader of fashions in Southern California; Mr. Glidden, the pioneer sewing-machine man, a gentleman who has made the agency in this city respectable, and others, will claim our attention.

LAN FRANCO BLOCK, LOS ANGELES.

LAN FRANCO BLOCK,

centrally located on Main street, opposite the triangle fronting Temple Block. This block was erected about fifteen years ago as a one-story building, the upper story being added some years later. This block, so well located for business, is filled with thrifty tenants. Among them we mention

HEINZEMAN & ELLIS,

the popular druggists who occupy the central part of the block, No. — Main street. These gentlemen are thorough and practical chemists and apothecaries, and from a long experience in this community they are well known, and have the confidence of the whole community. They are represented as carrying the largest and most extensive drug stock in Southern California, enabling them, in addition to their extensive retail trade, to do a jobbing or wholesale business. We call the attention of country dealers to the latter fact,

his office in the Lan Franco block ever since it was completed. The Doctor is too well known in his profession for us to add a word to enlighten the public. The Doctor is always among the first to respond to any public enterprise, and has done much towards advancing the growth and prosperity of his adopted home, Los Angeles. We might add that he has a choice tract of fruit and farming land, with water, that he is selling at low price and on easy terms. Persons wanting lands would do well to see him and his lands before making purchases.

E. H. WORKMAN,

the successor of Workman Bros., is one of our best known citizens; is one of the occupants of the block illustrated. The sign over the door, "Workman Bros." has become a landmark in Los Angeles, the firm having occupied their present

CENTRAL BLOCK,

as its name implies, is centrally located on Spring street, between the Court-house and Post-office, a street that presents a busy appearance at all times. This block was built under the directions of the heirs of Señor Lan Franco, in 1878, by Walter O. Moore and Walter L. Maxwell, who married daughters of the deceased. As shown in our engraving, the block is very attractive, and is one of the best business localities in the city. Commencing at the south end of the block, we have first

BEN J. THOMPSON & CO., GROCERS,

who carry a large and complete stock of fresh groceries, provisions, and feed-stuff, and everything usually found in a first-class grocery establishment. Mr. Thompson has had an experience of many years in his line of business, is thoroughly acquainted with the demands of this section, and possesses ample capital to go into the

Residence of Walter S. Moore, Los Angeles.

markets and buy when goods are cheapest, and purchase of the firm that will sell the cheapest. He sells for cash, and treats each and every customer the same, every one believing that they are his especial friends. Mr. Thompson is always ready to help any laudable enterprise along with his money or time. We cheerfully commend him to all.

friend, A. S. McDonald. Mr. McDonald learned the trade of shoemaker when a boy; has spent every day of an eventful life in the shoe business; knows the difference between a shoe with a real leather sole and one made of paper; knows every point in its make-up, and its real worth

Spring street, seeking more commodious quarters for his increasing trade. Mr. McDonald carries a stock of boots and shoes valued at about $15,000, does not owe a cent; buys for cash, sells the best goods at the lowest possible prices, is a self-made man, and an example of pluck

Central Block, Los Angeles.

A. S. McDONALD.

Everybody likes a *perfect* man, even when only a pair of shoes are to be purchased. Every person likes a man of pluck and energy. Such a man is our

Mr. McDonald came to this coast from the East fourteen years ago, commenced work at the bench as a "journeyman," and by close attention and diligence he was soon enabled to start a store of his own, on Main street, where he remained until the completion of Central Block, when he removed to his present location, No. [illegible]

where honest, straightforward transactions make the man.

LOS ANGELES CANDY WORKS.

Pure and unadulterated candies are a scarce article nowadays, but Mr. A. Merriam prides himself on the pure quality

(continued on page 182.)

Semi-Tropical Fruits.

CITRUS CULTURE.

GENERAL SUGGESTIONS AND THOUGHTS ON CITRUS CULTURE, INCLUDING THE ORANGE TRADE, PAST, PRESENT, AND PROSPECTIVE.

By Thos. A. Gerry.

The subject of markets for our orange product lies at the very foundation of the business, and is the desideratum of the future. Without an encouraging promise of abundant demand, the stimulus to production practically ceases. Before entering upon this branch of our subject, we shall make a few preliminary suggestions as a voice of warning to the novice in orange culture.

In founding an orange orchard it is not all poetry and romance; the stern and cold facts of the industry soon become apparent. The investment of money, time, toil, patience, and perseverance required in planting an orange orchard and conducting it to a bearing and self-sustaining condition is of more magnitude, with all our advantages, than is generally understood by beginners.

This being the case, many who are not apprised of the start of what they have to contend with, run behind, get into debt, and become discouraged, and the only avenue of apparent escape is a mortgage upon their orchard. This is generally the first step and commencement to ruin and the loss of the entire investment. But few succeed in redeeming their property from this incumbrance. In a few years the orchard begins to fruit, but too late for the over-sanguine owner, and the end is generally reached in a summary manner through the courts of equity and the assistance of the sheriff.

It is well to know upon the very threshold of the enterprise, that to plant, cultivate, and bring an orange orchard to a remunerative condition, requires many years of time and labor, close application and determination, coupled with perseverance and an indomitable will, to carry us safely through all the vicissitudes and disappointments continuously encountered in orange growing.

I do not make these preliminary statements for the purpose of discouraging the extension and multiplying of our citrus interests, but in all kindness, as a warning to the uninitiated, and perhaps over-zealous and impetuous of our people. We are prone to get in too great a hurry—go too fast for our ultimate good.

However great may be my belief and faith in the grand profits destined to be realized through this industry, I know there are, typically speaking, many dark, cloudy, disagreeable days to be encountered and overcome, as well as bright, balmy, sunshiny days to enjoy.

Then my advice is, be careful in your estimates, and do not go beyond your means: better get rich slowly, if need be, in this branch of business, but be sure of your ability to carry the load you start with, to a successful end. Do not, under any circumstances, load too heavily on the start; better add a little from time to time during your progress to your destination, than break down by overloading at the start, and never arrive at the promised land.

OUR ORANGE TRADE.

Little need be said in regard to the past of our orange trade; the demand has been in excess of the supply, as will be shown further on, at handsome, gratifying, remunerative prices. Our market has at the same time been confined to the Pacific States. This market has been ample in the past, our surplus not yet fully supplying the markets so easily reached. But the time is rapidly approaching, and is almost at our very doors, when a wider range of distribution must be sought.

Our young orchards now reach into the hundreds of thousands of trees, and their product, in a few years, will amount to millions of boxes of fruit (eventually the pride and glory of California in distant markets), which will require the exclusive use of whole trains of cars, or fleets of vessels, for transportation.

Our past experience in orange culture has been extremely gratifying, our present is not one whit less encouraging, and our future prospects lie open before us rich in tangible promise of continued bounteous golden rewards.

REASONS WHY OUR MARKETS WILL CONTINUE TO PAY.

There are several prominent items that enter largely as controlling factors into the probable continuous demand at remunerative figures, for this, our peerless product, of which I shall proceed to speak.

I take the position, and hold, that orange culture in this country will never be overdone; that all our superior oranges will be taken as fast as produced, without any great diminution in prices.

The area adapted to successful orange culture—and when I say orange, I mean to include lemon culture also—is at first importance to consider. We are all aware that it is indeed limited, and when compared to the entire area of arable land in this State, is at least as one to ten thousand, and it may be, as one to fifty thousand. And then but a small portion of this limited area where orange trees will grow and fruit, is adapted to the production and development of the most nearly perfect types of the citrus family.

This is known to be true in Southern California. In the middle and northern portions of the State, the culture is as yet in its experimental stage, but at best, only a meager portion of the country can ever produce the fruit successfully.

There are some small tracts of land there that, it is claimed, will produce an excellent quality of fruit. But in the event of the planting of those portions of our State adapted to this business, no conflict of interests can possibly arise: First, because there is room for all that can be produced, and, second, oranges ripen there much earlier than here, and would generally be marketed before ours were ripe and ready for shipment; hence, there is no danger of the oranges produced in one section of the State coming into competition with those raised in another section. Therefore it is apparent that the matter of over-production is scarcely worth considering at all, the limited area alone being sufficient to dispel any uneasiness on this score.

In Ohio and other States contiguous thereto, they have been planting uninterruptedly for scores of years orchards of fruits adapted to their climate, and yet the demand there for nursery stock increases annually. The inference is that the orchards must pay, that orchardists must be able to dispose of their fruit to advantage, or the markets would be filled to repletion and glutted, and the planting of new orchards on a large scale would long since have ceased.

More than this, all the States of the Union come in competition with one another, in a greater or less degree, in producing these same varieties of fruits; but notwithstanding all this, the demand for temperate-climate fruit trees continues unabated. On the other hand, the area adapted to orange culture in the United States is no area at all, as compared with that adapted to other fruit culture; and the danger of over-production of citrus fruits becomes a mere phantom, a ghost, in the minds of a portion of the more timid of our people.

Another prime factor, so far as California is concerned, that enters most conspicuously into this question of over-production is the wonderful impetus the great and overshadowing interest of grape culture had recently received, which, by the way, promises most encouragingly to be permanent in its ample remuneration. This has attracted and diverted the attention of pomologists to a great degree, and caused them to turn their attention in the direction of grape culture, to the almost utter abandonment of the extension of orange orchards. So true is this that the demand for orange trees the present season (1879-80) has fallen off to an alarming extent, it not being sufficient to enable semi-tropical nurserymen to make expenses; and the business of raising orange trees is languishing, all the nurserymen making strenuous efforts to dispose of their stock at figures made by their customers.

The consequence is, that large tracts of land eminently adapted to successful orange culture are being planted or reserved for planting to vineyards. Present appearances indicate that the planting of orange orchards will be on a wonderfully modified scale, as compared with that of the last ten years. When we come to examine this matter carefully, the specter of over-production is indeed most shadowy. If it ever happen that our citrus products crowd the markets and the prices be reduced, then the consumption will rapidly increase, soon clearing the markets and establishing an equilibrium. Oranges are to-day a luxury; poor people can not

afford to purchase them, even here where they are produced. Only the rich can enjoy their health-giving properties. The middle classes, who constitute the masses of our population, can not touch them at ruling rates.

Our population is rapidly increasing, and perhaps in a greater ratio than our orange orchards and their production, which must not be overlooked by the investigator of this subject.

The question of transportation enters largely into this subject. It requires no prophet to predict that the increase of our railroads and other means of transportation will continuously transcend the volume of our productions.

(To be continued.)

THE RED OR CIRCULAR SCALE OF THE ORANGE.

By Wm. H. Ashmead, Jacksonville, Fla.

Bibliographical.—Chrysomphalus ficus Riley—Manuscript notes; Chrysomphalus ficus Riley—Ashmead, *Fla. Agriculturist*, 1879; Chrysomphalus ficus Riley—Ashmead, *Pacific Rural Press*, 1880.

In September, 1879, I received the following communication, with specimens of infested leaves, from Mr. G. M. Holmes:

Orlando, Orange Co., Fla., Sept. 20, 1880.

Dear Sir: Inclosed I hand you a leaf of an orange tree infested with what appears to be a species of scale insect, which is new to us down here. It spreads from tree to tree very rapidly, and is not confined to the leaf, but appears upon tender stems and thorns. As you can see, it turns the leaf yellow wherever it locates itself. I should like to know whether it is an enemy much to be dreaded, and, if you have had experience with it, the cure. Although a stranger to you, I see by the *Florida Agriculturist* that you have made the insects on orange trees a study, and I thought you might give me some information about this particular insect. Yours respectfully, G. M. Holmes.

The scale being new to me, I immediately forwarded specimens to Prof. C. V. Riley, and from his reply, I quote the following: "The circular dark-brown scale with a golden center has long been in my cabinet, and I have found it quite injurious to *Ficus elastica*. I have designated it by the manuscript name, *Chrysomphalus ficus*, but have published no description of it, as the mere description of the scale without fully characterizing the insect that makes it, in both sexes, is imperfect entomological work."

ITS INTRODUCTION AND SPREAD.

In Los Angeles, San Jose, California, and, indeed, in various parts of the State, it is quite numerous on the orange, and is there known as the "Red Scale." The orange tree has but lately been introduced and grown in California, and this particular species is, therefore, not indigenous there. Where, therefore, did it come from, and how was it introduced into the State? These are two very important questions. Now, the commercial relations existing between the Californians and the people of China, Japan, and Australia point to one of these countries as its original home or starting point, from which it has spread. Indeed, many oranges have been imported from all these places, and it would not be surprising to me if, like our own *Long Scale* (*Aspidiotus Gloveri*), the Red Scale had been imported in the same manner, i. e., on the leaves, branches, or twigs of an imported tree. It has evidently been introduced into Florida this way.

ITS FOOD-PLANT.

Prof. Riley states that he first found it on the *Ficus elastica*; this, I presume, is an exotic species of fig. I see by the *Pacific Rural Press*, that this, or an allied species, had been found on the apple trees in San Jose, Cal. With the orange, it attacks the fruit, leaves, and twigs, seeming to like one about as well as another.

ITS NATURAL HISTORY.

I have not been able to thoroughly work up this insect, for want of specimens. From specimens received at different times, there would seem to be at least three broods, if not more, during the year. The first brood probably hatches in May; the second, from last of July to second week in August; and the third, from last of September to first week in October.

DESCRIPTIVE.

Eggs.—From 18 to 30 under each scale, less than .01 of an inch in length, ovoid, smooth, not quite twice as long as broad, of a bright yellow, promiscuously inclosed in body-walls of dead female.

Larva.—Length of body less than .01 of an inch, nearly twice as long as wide, *bright* yellow, ovoid, much wider towards head, being widest at thoracic segments, two very short anal setæ, hinder margin rough from numerous small fleshy tubercles, with a few short hairs around margin, no indentations as in *Aspidiotus rosæ*; antennæ, 6-jointed (not easily made out with my microscope, which is of a low power); basal joint short and stout, nearly as wide as long; joints 2 and 3 less wide and of equal size; joints 4 and 5 about equal, each longer and thicker than 2 and 3 together; joint 6 much thinner, ending at tip in 2 long hairs, the inner being longest; an inner and outer hair on the basal joint, with two inner and two outer ones on joints above these; legs ending in a feeble claw and four digitali, the two upper being longest; femora thickly swollen, with a distinct lobe near base, from which a sharp spine issues. I have never noticed this in any other scale insect.

Female Scale.—Form round or circular, flattened slightly, rising towards center, of from a reddish to a blackish brown color, paler at margin, measuring from .04 to .12 of an inch in diameter; in the center is a slight depression, in larger specimens .02 to .06 of an inch in diameter, and of a bright golden yellow, with a small brown cap.

REMEDY.

Mr. Holmes writes me, under date of August 6, as follows: "As you request, I forward you by this mail a box containing specimens of the *Chrysomphalus ficus*, which I hope may reach you in good order. They have not done me any material damage as yet, but I keep my trees in very healthy condition and thrifty growth, as I have a large drove of cattle, and can compen them. In my experiments for their removal, I have been most successful in the use of a strong brine of salt and water applied twice at intervals of two weeks. It is heroic treatment and takes the leaves off, but the scale comes with them, and if done just prior to a growing season, they soon send out a luxuriant new growth and seem more healthy than before. I think if potash was mixed with salt and water it would be an improvement, and am going to use it in that way. You have my best wishes for the success of your book on orange insects, which will supply a want or need long felt by intelligent orange-growers."—*American Entomologist.*

ORANGE MARMALADE.

Choose medium-sized, juicy oranges. Slice a dozen of them as thinly as possible, and also three small, fine-skinned lemons. Don't try to take the slices clear across the fruit; it is better to have them in smaller pieces, and be careful to take out every seed. Put the fruit into the earthen bowl and cover it with cold water. Let stand twelve hours, then boil together until the orange skins are tender, after which add as many pounds of granulated sugar as there were of fruit at first. Boil until the rinds look clear, and the mixture thickens when a little of it is cooled.

Put it into small earthen or glass jars, when cool, press brandied paper close to the marmalade and paste paper dipped in the white of an egg over the top of the jar.

The county of Los Angeles appears more advantageous for colonies than any part of Southern California, from the fact that land is cheap, and the best land is near the market. The Los Angeles and San Bernardino Land Company will furnish colonists with smooth, rich land, within sight of a landing or a railroad where grapes, corn, wheat, alfalfa, orange, olives, nuts, and all kinds of northern fruits can be raised to perfection. On La Habra, Los Cayotes, Las Bolsas, are a diversity of soils which can be turned to profitable account for all kinds of farming. By settling in colonies the cost of developing water is made but moderate, and schools, churches, and markets are established at once. But Thomas Hughes established his Rugby colony in Los Angeles, instead of in East Tennessee, the property of the settlers in three years time would have been worth double what it will be when it now is. The soil of the Rugby colony, we are informed, is very thin and rests on clay, while the soil of the Stearns ranch is from six feet to one hundred feet deep, and inexhaustible, while our local market will be good for all that is produced. There is plenty of room for a dozen colonies on these lands.—*Los Angeles Commercial.*

Southern California.

NEW INDUSTRIES IN LOS ANGELES COUNTY.

Editor Semi-Tropic: Many new enterprises are being tried in Los Angeles county this year. Our farmers who had heretofore depended upon raising corn and barley, but which have ceased to afford a living profit, have been forced to try other things, in the hope of finding a crop that would pay a profit on its cultivation. Wheat has been tested successfully, and a large crop is the result, which will supply the home wants, and leave a surplus for export, 2000 tons of which will be shipped direct to Europe on a ship now unloading coal at the port of Wilmington. Other vessels will probably follow, and many thousand tons will have been on vessels for foreign parts. So that it will be seen that wheat raisers in this county have an immense advantage over those who dwell in the interior valleys, and who have to pay high freights to reach the sea board. The fact that this is the best dairy county in this State is beginning to be appreciated. Several cheese factories have been established in this county, the quality of the cheese is excellent, and meets with ready sale as fast as it is fit for market. The local demand is such that unfortunately none of it finds its way to the San Francisco market, where it could be seen by the dairymen in the northern part of the State, who seem to be impressed with the idea that Southern California is a worthless, and country, entirely unfit for dairying, when in fact our valley contains more good dairy land than all the rest of the State of California. Our climate, instead of being hot, is mild and temperate, and such a small quantity of the food consumed is required for the sustenance of the animal in maintaining its condition and keeping up the animal heat, that a much larger portion becomes available for the production of milk, butter, and cheese. On the sea coast of Marin and Sonoma counties, the sea breeze is very cold and harsh, and a large proportion of the food eaten is required to sustain life. Dairy cows, removed from there to the milder climates of Monterey and San Luis Obispo counties, were found to yield about 25 per cent. more butter and cheese than they had done before. Our climate is at least 25 per cent milder than that of the two last named counties, and consequently it is reasonable to expect that cows will do at least 50 per cent. better here than in Marin county. There they have green feed about six or seven months of the year, and when the grass dries, the milking season ceases. Their greatest production of butter is in the spring, at a time when the markets are glutted and prices are low; but here, where by means of natural green grass, alfalfa and green crops, our green feed lasts all of the year, cheese-making can be carried on in the spring, when the price of butter is low; and butter-making in the fall and early winter, when butter is scarce and high. The dairyman here is not dependent on the seasons, but can adapt his business to the markets, so as to secure the best prices and the largest profit.

For our market we are not dependent upon San Francisco. The miners of Arizona are now taking, and will continue to take, all of our surplus of butter, cheese, and eggs; and purchasers for that growing market are giving San Francisco prices to our farmers for these articles at their own doors.

This same Arizona market also requires a large supply of fruits and vegetables; her soil is not adapted to the production of the latter; whilst Los Angeles county has truck and garden ground enough to supply a million of people with all the vegetables they could consume.

It does not cost a fortune to start in the dairy business in this county; a man with a small capital can do it.

I will make an estimate on a basis of 40 acres, purchased in this valley:

40 acres of land at $30 per acre.	$1,200.00
Plowing and seeding to alfalfa.	300.00
Cost of well.....	300.00
Buildings, etc.....	200.00
40 cows at $50 each	2,000.00
Total cost of land and stock..	$4,000.00

All of this would be cash except the price of the land, on which only one fourth would be required to be paid cash, the balance being divided into three equal annual payments, with ten per cent. interest; and this could easily be met out of the profits of the business.

I have only estimated one cow to the acre. Whilst it is customary to keep two and three cows on an acre of alfalfa, these cows, with a full supply of green food for the entire year, of course will do much better than cows in the northern part of the State, dependent on the natural grasses, where the milking season does not last over seven months in each year. But I propose to make my estimate on an equal basis of production.

On the Point Reyes ranch of Messrs. Shafter & Howard, which is one of the very best dairy ranches of that part of California, each dairy farm is rented complete, with buildings, dairy fixtures, fenced land, and first-class dairy cows, to the dairyman, who pays either a fixed rent for each cow, or a certain proportion of the butter and cheese. Some years ago, rents used to vary from $25 to $30 for each cow to the owner. Now, since the fall in dairy produce, I imagine that not much over $20 each are paid; but for convenience I will estimate the rent of each cow at $25. Land in that part of the State, with usual and necessary improvements, could not be purchased for less than $50 per acre. At the Point Reyes dairies they always estimate one cow in every ten acres in stocking their dairies; consequently, to keep 40 cows, 400 acres will be required at $50 per acre..... $20,000
40 cows at $50 each. 2,000
Total capital invested $22,000

Forty cows yielding a net rent of $25 each would amount to $1,000; which would be 25 per cent. on the Los Angeles investment, and less than five per cent. on the other. Actual results would make the showing far better for the former, and still worse for the latter; in fact, the margin for profit is so small in those northern dairies, that after taxes and other expenses are deducted, I don't see how they are kept going; besides, these lands are dependent upon the rains for their crop of grass. With us, the man who has the land and water is independent of rains and seasons; he can *control his crop*, and takes no chances. Dairying, properly conducted, is profitable in this valley.

But sugar production is the most important enterprise that has been attempted, and I am happy to say that it is a splendid success. A number of our farmers have planted small patches of Minnesota amber cane, ranging from one to fifteen or twenty acres each, and the cane is now being worked for syrup and sugar at three different mills in this valley. With favorable results, it is found that a fair crop of cane will yield 200 gallons of syrup, weighing 12 lbs. to the gallon. When evaporated to about 13½ lbs. to the gallon, it becomes much sugar too thick to flow. Prof. Hilgard's tests indicate that 12 lbs. of syrup will yield six lbs. of cane sugar, leaving six lbs. of grape sugar or syrup. Dr. Collier, of the Agricultural Department at Washington, found that when the cane was permitted to ripen, he could get 9 lbs. of cane sugar out of the 12 lbs. of syrup, leaving only 3 lbs. of grape sugar; but taking Prof. Hilgard's results as the basis of the calculation, 200 gallons of syrup would give 1,200 lbs. of brown sugar per acre, worth, at 7 cents per lb., $84 per acre, and if the 1,200 lbs. of syrup and the large crop of seed will pay the expenses of cultivation and manufacture, it would yield a magnificent profit; but suppose we cut down the net profit to $50 per acre, where in the whole range of farming operations is there any other crop that will pay like it?

When grain or fruits are raised, the cultivator has to take the chances; his crop is liable to be destroyed by various causes, which are so numerous that it would take too long to enumerate all of them; but this cane crop is an absolute certainty. Given the seed, land, sufficient moisture, and a reasonable amount of cultivation, and no power on earth can make a failure of the crop. It is the same as with the dairy; the crop of grass is certain. A man can go into either business here, knowing that he runs no risk of failure. Can any other part of this State say the same? If so, I don't know where to locate it. The largest of these cane mills cost $500 complete, and is averaging eighty gallons of syrup daily. So far, there has been no attempt to make sugar, except experimentally, as there is a demand for all of the syrup they can make this year, at 65 cents per gallon, wholesale; the mills charge 25 cents per gallon for manufacturing, or half the syrup, as the customer decides. The machinery is

not expensive, and the process of manufacture is simple. The business can be carried on either on a large or small scale. For sugar-making, however, I think that steam evaporators would be far preferable to direct fire heat, on account of the risk of scorching the syrup. Sugar is like gold—it always finds a ready market, and if the syrup market should be oversupplied, the distillers will always take the surplus at a fair rate.

I was in hopes to have been able to make an equally favorable report regarding the sugar beet. A very fine crop has been raised, which is being successfully dried; but, unfortunately, the machinery put up to work it was not a success; so that, at this time, we do not know if the fault is in the machinery, or in the beets. But as a quantity has been taken north to be worked in the sugar factory at Alvarado, we will soon know. The beets are known to be very rich in sugar, and unless they contain some very rebellious salts, should yield enormously. But whether they are a success or failure, the amber cane will furnish all the sugar that California requires, if its cultivation is pushed to the full capacity.

WM. R. OLNEY.

THE CODLING MOTH.

The writer of this article has, during the last few months, had his attention repeatedly called by prominent nurserymen and orchardists of Los Angeles, to the fact that the codling moth, the pest of the Eastern States, and recently of northern California, is spreading through our orchards, and promises to become as serious an evil as the already troublesome scale-bug. This being the case, it becomes our duty to call the attention of fruit-growers, generally, to the pest, that they may take such immediate measures as will at least check the progress of the insect. The apple, pear, quince, and other fruits of the same nature, are too valuable to be sacrificed, when, by using a little care, the damage may be much abated.

HABITS OF THE CODLING MOTH.

The codling moth belongs to the family *Tortrices*, and passes the winter in the *larva* state, sometimes in the *chrysalis* form. It can generally be found in the cracks or crevices of the trees—in fact, in any place where it can secure shelter from the weather. The moth seems to prefer the softer-barked trees to any other for winter quarters. If the spring weather is favorable (not too cold), the larvæ are ready to assume the chrysalis form from the first of March to the fifteenth of April; if the conditions continue favorable, the perfect insect will appear in twenty days.

The moth deposits the egg on the blossom end of the fruit—the eggs being attached by a pasty substance. It is the opinion of many fruit-growers that at the time the egg is deposited the skin of the fruit is punctured, thus making an easy entrance for the larva.

The larva is hatched in about ten days, and begins to eat eagerly, and burrows towards the core containing the seeds. When first hatched it can scarcely be seen by the naked eye, and at six days measures one quarter of an inch long, and at twenty days it reaches its natural size.

INCREASE OF THE INSECTS.

It is claimed that these insects increase in an alarmingly rapid manner. Thus it is stated that each female lays from 200 to 500 eggs. Taking 250 as the lowest number, twelve female moths would produce 2,000 catapillars—if one half of these were females, they would produce 240,000. The third generation would reach 24,000,000.

EXPERIENCE ELSEWHERE.

There is now no fruit-growing State in the Union which is entirely free from the ravages of the codling moth. It is also doing much damage in Australia, as the following statement, taken from a Melbourne paper, will show.

"I had observed affected apples as early as January. I took the affected ones off and examined them immediately. At this time there was on some of the affected apples a red spot, with a brown speck in the centre, which I supposed to be the egg at this stage. I could not find any grub. Next stage, a small hole covered with excrement, and I found the grub but very small, about one eighth of an inch under the surface of the apple. I found some near the core of the apple, and able to crawl about freely when taken out of the apple. If not taken out, the grub will eat its way into the core of the apple, and, in most cases, will eat the pips; then it will bore its way in through the side, or along the core through the eye of the apple. I am told that they weave a web by which they descend from the apple to the ground. I have not seen them doing so, but I have found the web attached to the apple and floating in the air. The apples so pierced by the grub generally fall to the ground; they are sure to do so if the core is eaten away, and very often before the grub leaves the apple. The moth is a night moth. I have seen them in an empty room in which there were apples the previous year, and in which empty cases remained, showing clearly that the grubs will live and arrive at maturity in any shelter I place. Thus the moth does its work of destruction by night. I have seen the eggs when recently laid, and have marked it by sticking a gooseberry thorn in the apple near the egg, and watched it until I saw the grub in full growth. I have not seen any recent traces of the moth after about the middle of March, at which time we had a little cold rain which rain, I believe, destroyed the grub in the apple by filling the holes with water. Pears and plums are also affected by the grub. I here beg leave to make a few suggestions. I believe the insect is a very good thinner, destroying the grub, as in many gardens they can be found in great numbers under the old bark that is on the trees. I have taken as many as twenty scales from under the old bark of one tree, and I believe there were many other grubs in the garden. The old bark (every rack and crevice should be searched for the grubs). As soon as the apples are seen affected in the trees they should be taken off and destroyed. A good large hay band should be tied around the trunk of the tree while the apples are growing, at the height of about one foot from the ground; the grubs will shelter under the bands, which should be taken off every two or three weeks and burnt. I believe the grubs will be lessened very much by this means, as they certainly seek for the trees for shelter. I believe it would be a good way to burn naked lights on a tree night in the season, to see how many moths are destroyed by making out the flame. I have been visiting many orchards about Hobart Town that some men have lost one half, and many have lost one third of their crop of fruit this year by the grub. I know a man who had a hundred fully one hundred bushels of apples destroyed by the grub, one half of them never left the tree. If the trees on the ground and those thrown in the stack the remainder put in a hamper as adjoining paddock. Now there is not the way to keep the grub under. I asked an old man why he let the grub fall off the trees. He said, 'I don't keep them as a source of revenue.' Another man in answer to a similar question said, 'I can not bother with them; if they leave me enough for my own I don't care.' Now these are the kind of men that the orchard, or fruit grower, seeks protection against."

REMEDIES SUGGESTED.

The following remedies have been successfully tried for the extirpation of the moth. If any of our readers are aware of better methods we shall take pleasure in publishing their observations.

A solution of sulphur and lime, consisting of two pounds of sulphur to five pounds of slaked lime, thoroughly mixed, has been recommended. Wash the tree when the moth is in the larva state. Bonfires and lanterns at night about the time the moths begin to fly, destroy thousands. This method can not be wholly relied upon, however.

A concentrated wash of whale-oil soap, sulphur, etc., is the surest remedy known. It destroys every form of insect life on the bark, and at the same time invigorates the tree. The old bark should be thoroughly scraped off into sacks spread upon the ground. The wash can then be applied with a whitewash brush.

"AN OUNCE OF PREVENTION."

Common wrapping paper should be firmly bound around the trunks of the trees. The larva, creeping up the tree, makes its nest in the paper. These wrappers can be removed and burnt every two weeks. Papers and rags can also be placed in the crotches of the trees.

A gentleman residing in Yolo county tried a plan in his apple orchard which seemed to work successfully. He purchased three hundred hens and turned them in among the trees. He then had a force of men pick off every apple which was infected, and the hens speedily devoured them. In this way he destroyed the early brood and saved nine tenths of his apples. Remember that any means taken to destroy the early brood will preserve the late fruit.

I WISH TO EXPLAIN MYSELF.

So far as we can learn by a general tour through the country, and by our intercourse with leading orchardists and shippers we can not learn that the pest has spread much outside of the city. We advise every one who has an orchard to immediately examine it carefully and take the necessary precautions. More particulars will be reported in this journal.

PEARS HERE. Last Monday there was such a swarm of pedlar bugs on the rails of the Connecticut River Railroad, between South Deerfield and Holyoke, Mass., that it was with difficulty the locomotive could draw the train through them. The crushed insects made the rails very slippery, causing the wheels of the engine to slide.—*Farmer, Seattle, Washington.*

Subscribe for SEMI-TROPIC CALIFORNIA—only $1.50 per annum.

Viticulture.

WINE GROWING SELECTION OF VINES.

Experience has demonstrated that the best "all round" vine for wet wine is the Hungarian Zinfandel—by which term we mean the best for white as well as red wine, as well as for blending with others and for depth of color when properly handled; moreover, like Seyraz and Hermitage, it makes itself at home nearly equally well in hot situations and comparatively cool ones; and, on the whole, it is a reliable bearer. And in this place one feels tempted to express regret that its produce should be called—as it is universally—"claret," instead of by the name of the vine. But on this matter of nomenclature we shall have a good deal to say on a future occasion. This particular vine, however, might justly find a place in every Californian vineyard. The white wine made of it has already proved, as a last season's wine, superior in its keeping properties to a considerable number of other white kinds. Of the selection of white varieties, it is more difficult, at present, to speak with safety, because situation and climate have so marked an effect both on them and their yield. We speak now from observation, information, and analysis of many samples during two years. For districts such as Sonoma, Napa, and all others of like climate and exposure, the three best have proved to be Riesling, Flaming Tokay, and that one of the Chasselas family which yields the wine called Gutedel—a product second only to Rhenish hock. Now, for such climates as those of Fresno, San Bernardino, Los Angeles, and the sunny hills and valleys of the south generally, beyond the Zinfandel we have hitherto seen none superior to Berger for fine, light, white wine. All through these dry, sunny districts may be found a home for Spanish and Portuguese varieties. And if ever a gallon of real Manzanilla is to be grown in the State Fresno is the place. There, both day and night, for months together, when the grapes are ripening, the climate is all that could be desired—probably equal to that of the hot, sandy plains of San Lucar or the Alcubeja. But at present the suitable vines are not known to be in the country, at least the best of them. The Mission is certainly one; so is Pedro Jimenez, if the true vine be here. But Tempranillo, Palomino Blanco, and Doradillo can nowhere be heard of; and until they shall have been introduced and brought into bearing, no one can tell whether the wine will prove to be like true sherry or not. Thus much is certain—many thousands of acres have been planted with those varieties in South Australia, and have been in bearing for more than a quarter of a century. They bear prodigiously well, and enjoy a climate even greater than that of Fresno; yet to this day not one gallon of their must has turned out to resemble any known variety of Spanish sherry. That Palomino Blanco and Tempranillo yield a delicious wine, which ripens rapidly, is certain, but it is not Manzanilla. The characteristic bitterness of that prince of wines is lacking altogether, and frequently the color also.

The white wine made here and called sherry—for the most part a hot, poor, highly-brandied article—is a very caricature of Spanish sherry. Among the useful teachings of the Board of Viticulture we expect to find that of accurate nomenclature of vines and wines. Meanwhile, experience might instruct vintners, for their own advantage, that the vignerons of the colony of the Cape of Good Hope received their chance of a market all over the world by insisting on calling their white wines "sherry." The expression "Cape sherry" is a by-word in every good wine cellar the world over; and it is certainly not inferior to California sherry. All that we have said of sherry, *mutatis mutandis*, may be predicted of port. The port-wine grapes are not in the State, and so port wine can not be made.

Lying before us is one of those exhaustive investigations into the wines of Spain and Portugal by the most experienced of wine students, Mr. J. B. Keene, of the English Customs Department, London. Until within the last three years, when he was sent to investigate adulterated teas, nearly all his public life has been devoted to that one work. The present report covers 1,265 samples, of which 554 were Spanish and 457 Portuguese. Now, the reader of this article will do well to ponder over the following sentence, and, for the credit of the State, act in the spirit of it, keeping their wines pure and natural, and not the deleterious stuff so often met with: "Of the total number of Portuguese wines, 381 were in their natural state, having, so far as I could discover, no trace of added spirit, while 49 were evidently fortified, some having as much as 40 or even 50 per cent. of proof-spirit; of the red wines, 318 were natural, and 25 fortified; of the white, 63 were natural, and 24 fortified. Those from the district of Porto (the Alto Douro) were the lowest strengths of any; none belonged to the category of what we are accustomed to call port wines."

The average of strength, including both the fortified and the natural, is only 26.72 of British proof—or alcohol 15.26 per cent. Plenty of the natural wines of this State far exceed those figures. The above may seem a digression, though not so in reality. If there be a good sale in the Eastern States for artificial port or sherry, let them be as like the original as possible—at any rate let them be made from the Spanish and Portuguese grapes of the kinds whose used for wines of those names. No more useful work could be done with a part of the three thousand dollars, just voted by the Legislature for experiments at the University, than the procuring of cuttings from Spain and Portugal, and causing them to be planted at several dissimilar localities, besides the nursery at the University. Cuttings must be obtained, not seeds. Seeds are sure to be hybridized; such is the fault of the Mission vines. They belong to the Beni-carlo family, but are not pure. B.

THE PHYLLOXERA.

Saragossa, October 17.—This ancient capital of the kingdom of Aragon is always very lively at this season of the year, when the faithful come pouring in from neighboring districts for the popular festivities of Nuestra Senora del Pilar. This autumn, however, fully a week before the usual epoch, the streets of Saragossa were filled with a motley gathering of men speaking the rural dialects of Catalonia, Navarre, and Southern France. It seemed strange to see farmers and peasant proprietors in their Sunday-go-to-meeting clothes, who were chatting away with that volubility and animated gestures of the sons of Languedoc, close to bronzed Andalusian agriculturists, equally demonstrative and glib-tongued. * * * After long debates, in which natives and foreigners came to the conclusion that the best preventive precautions were in vigilant examination of the vines, in good manures and careful tilling of the soil, in severe measures against the infested districts or countries and their exports, the congress closed, after adopting the following resolutions:

First—To defend the vineyards at any cost, whenever it may be possible to do so, and to prevent the invasion and propagation of the insect at any cost.

Second—The extinction of all foci of phylloxera by insecticide substances and other modes of relief that must be employed in the cases that science and experience may recommend.

Third—When the varied means of extinction are inefficacious, wine growers must have recourse to the American vine.

Fourth—In future, plantations of resisting American plants must be organized in every province and wine-growing center, and the plants so introduced must be distributed among the cultivators of the vine to allow them to study their conditions of adaptations.

Fifth—In the districts that are completely infested, the authorities ought to allow the immediate and direct introduction of American shoots for grafting purposes, but without trunk or roots, and such shoots, if they are of the year's growth, must be brought into the country with all the precautions that the administration and science may deem necessary, and subject to all the prescriptions that laws and regulations may determine.

Sixth—The Congress most respectfully informs the government that it deems a reform of the actual legislation on the phylloxera necessary and most urgent.

These resolutions have struck every one as proving that the Congress had not achieved much in its eleven sittings but recommending the introduction of the American vines, now adopted all over Europe. *Corr. New York Herald.*

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GRAPE SUGAR.

The scarcity of any article in the market sold as "grape sugar," or "glucose," in distinction from cane sugar, blinds one to the actual extent of the grape sugar industry in the country. There are to-day in operation and in progress of construction ten grape sugar factories in the country, which will represent an investment of $30,000,000, and will consume daily 56,000 bushels of corn (the name "grape sugar," of course, is technical, and has nothing to do with grapes). Three of these factories are in Buffalo, but the others are in the West, distributed through Michigan, Illinois, and Kansas. Nearly all are running night and day to fill orders. Their product does not nearly all come on the general market as sugar, for a large part is at once absorbed for use in the processes of making ale and beer, of curing leaf-tobacco and hams, of making confectionery, and of adulterating cane sugar and syrups. Since glucose is not simply a cheaper sugar, with less saccharine matter than cane sugar, but is under grave suspicion of containing injurious acid elements, the last two uses are objectionable; the rest are probably entirely harmless, and it is ground for congratulation that a cheaper sugar has been found for these processes. It is but fair to say that at the last meeting of the Social Science Association two authorities of respectability took exactly opposite grounds on the injuriousness of glucose; the balance of opinion, however, is against its use in food. In the cases where it is not taken directly into the system, but only used in preparing other foods, as in curing hams, there is probably no danger about it.

The whole industry has grown up since the first permanent factory was established in 1872. The chemical treatment required is no secret, but the necessary skill in manipulation is possessed by only a few, who guard it as a secret. The amount of raw material used and the annual product is also kept a secret, probably on account of the adulteration practical. It may be calculated, however, that thirty pounds of the sugar do not cost more than 75 cents; and as they are sold at $1,25 to $1,50, an average of 5,000 bushels of corn per day used (30 pounds of sugar to a bushel) gives a daily profit of $2,500.

A New Vine.—The London *Times* has the following: A French explorer, M. Lecart, who is at present on the banks of the Niger, writes home from "Kimaban (Gangaran), July 25," that he has discovered a new vine, which promises to be of great commercial value. He says the fruit of the vine is excellent, and abundant, its cultivation very easy, its roots tuberous and perennial, while its branches are annual. It can be cultivated as easily as the dahlia. He himself had been eating the large grapes of the vine for eight days, and found them excellent; and he suggests that its culture ought to be attempted in all vine-growing countries as a possible remedy against the phylloxera. He is sending home seeds for experiment, both in France and Algeria, and will bring home specimens of the plant at all stages. It is not without danger that M. Lecart has been able to make this discovery, as he states that the people of Soudan are in a state of great excitement and apprehension at the many attempts of white people to penetrate into their country. The story of the last expedition sent by France into the south of Algeria has spread to all parts, and the conviction of the natives is that the travelers are collecting information preparatory to conquest. Perhaps the natives are not very far wrong.

CITRUS FAIR ON WHEELS.

The movement put on foot during our late fair to send samples of our citrus fruits to the East, to be exhibited in principal cities, has met with favor in every county in southern California. The exposition will go. The objects are too well known for discussion. It is fresh in the minds of all what a commotion Kansas made a few years ago, by exhibiting her fruits in eastern cities, what a grand exhibit she made at our Centennial, and how the emigrants flocked to her and settled up her vacant prairies with thrifty farmers.

There is no branch of farming so fascinating or profitable as citrus growing. Show to the doubting Thomases of the East what we are doing, and we can do what Kansas has done, fill up our vacant lands with industrious farmers. What Kansas has done we can do. It now remains for our citizens to come up liberally and help grease the wheels of the "citrus fair on wheels."

We believe the programme is about as follows: Each county and locality to raise a fund towards paying expenses of the traveling fair. Each locality to hold a citrus fair of their own during the week, March 11. The following week each county, society, locality, and individual to join in one grand exposition at the Horticultural Pavilion, March 14 to 19, under the auspices of the Southern California Horticultural Society. The traveling exposition to be made up from this fair, and started on wheels for the East as early as Monday, March 21.

The county committees will appoint a suitable committee to take charge, accompany and exhibit the fruits throughout the East, explaining and answering questions, and distributing printed matter. Each and every locality and county to be represented and share in the results.

We believe every public-spirited citizen of Southern California will do something towards making this traveling immigration agent, citrus fair, a success.

Mr J. H. Sarmon of the Grange Store, Los Angeles, had a fine exhibit of gilt-edge butter at the Pavilion during the Fair. Although not exhibiting for a premium he made a large display of the different kinds which he has for sale, and demonstrated fully that this county ranks A No. 1 in dairy products.

SIERRA MADRA

The Wilson trail which leads to the summit of the Sierra Madra range has been well patronized the past season. Mr Lewis Richardson, from whose place the trail starts near the Santa Anita Canyon, has repaired and kept the trail in good order. Several parties from San Gabriel and Pasadena have lately made trips up the mountain. Our thanks are due Mr. A. F. Day, who has just returned in company with Mr. El Messenger and Mr. H. A. Wallis, for a new quarter of venison from the summit.

CITRUS FAIR,

under the Auspices of the

SOUTHERN CALIFORNIA

Horticultural Society,

LOS ANGELES,

March 14th to 19th, 1881.

LARGE PREMIUM LIST.

It is the intention of the management to make this **THE GREAT EXPOSITION** of the year. The great industry, or Citrus Culture, will be largely represented in Southern California by a magnificent exhibit of all

Application for space, or information, should be addressed to

HEN RICE, Sec'y,
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ONLY $1,200.00.

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BEAUTIFUL, EVER-BLOOMING
ROSES

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Rose Growers, West Grove, Chester Co. Pa.

Apiary Department.

USEFUL ITEMS IN BEEKEEPING.

RULES FOR AMATEURS AND VISITORS.

All actions and movements should be easy, gentle, and moderate.

If bees come "after you," stand still a moment with head bowed.

Never run, make other quick motions, or fight the bees.

If stung, make a little mud with spittle, and hold on the spot for three minutes.

Knock on the hive several times, five minutes before opening it.

Go slow—take things moderate; if the bees feel mischievous, wait a little, and move frames slowly; if they don't behave, blow a little smoke from rag or pipe, and go on.

Don't vex, annoy, stir up, or excite bees more than you can help.

Take yourself and all traces of honey away from the apiary as soon as you are done your work.

Never pound, thump, jar, or make unnecessary bustle about an apiary.

If bees get cross, do you keep calm; "Whom the gods would destroy, they first make mad." If you get angry, excited, and feel like fighting, 'tis as good a thing as the bees want; they are a host in the fight.

If your bees are weak, give them a frame of brood from a strong hive.

If they are queenless, give them a frame of brood and eggs, with plenty of young bees.

There is no putting off for the morrow, that which should be done to-day. The extractor has got to run; and an apiary of three or four hundred stands should be gone through once in twelve or fourteen days, according to the time of year that brings us to the different qualities of honey.

If a day is lost, it is lost forever, and a day's work for one hundred stands of bees, in the best of the season, is from 500 to 700 lbs., and the price of that would pay a hired man a month's wages. Again, if the combs get full and have no room the bees will swarm, and that takes time to put them back, so both you and the bees have lost time, which is valuable if controlled right.

Two men can extract from thirty to fifty hives in a day; if the honey is in the right condition to extract, the day's work will count from 2,000 up to 2,500 or 3,000 lbs. This has all got to be counted in the morning, for it is better to let it settle twelve or more hours. It will keep better, look clearer, and all the fine particles of wax or comb will rise and should be taken off every day or two.

HYMEN.

Ventura County, Cal.

NECESSARY QUALIFICATIONS OF A BEEKEEPER. To make a proper and successful apiarian, one should love and take special interest in the business and in all that pertains to the successful management of bees, carefully noting the observations, experience, and instructions of intelligent and successful beekeepers; patient in observing and supplying the wants of the colony, and assisting it to accomplish the most rapid progress for the increase of bees and honey, and at all needful times to guard them from too great cold, heat, or moisture, from birds, beasts, moths, and other insects, and generally treating his useful colony with quiet gentleness and considerate care, never disturbing them unnecessarily or annoying them by quick or boisterous motions, always avoiding timidity, nervousness, or fear.

COUNTY NOTES.

A hurried trip through Pasadena the other day satisfied us that the colony has never been making more gratifying progress than at present.

Mr. Thos. Radford, of this city, believes that careful cultivation and thorough pruning of the orange tree will greatly mitigate the ravages of the scale bug.

Lima beans seem likely to become one of our most profitable crops, and many farmers in the foot-hills will plant a large area with them this year. The market price at the time of writing is six cents per pound.

The early tomato crop at Monte Vista yielded the owners a handsome profit last spring. Many will go into the business next year.

Mr. G. W. Dye, who lives about a mile from the race track in this city, has a small vineyard on a piece of dry land, containing nearly every variety of grapes known in California. Not a drop of water has ever been put on the vines, but they were loaded this fall with some of the finest fruit we have ever seen.

The Co-operative Nursery, which is now in charge of Andrew Snyder, looks exceedingly well. The trees are all healthy and thriving.

Mr. Hitchcock, who has charge of Mr. Archer's place on Jefferson street, showed us some very fine apples recently. The trees are not irrigated, but are carefully cultivated.

There is some prospect that the Bren ranch may soon be subdivided and sold in small tracts. It is a fine body of land, suitable for either fruit or grain growing.

Now and then you can find a man in Los Angeles county who don't take an agricultural paper, or any other kind of a paper. He will tell you that he knows all about these things "can't learn him nothing;" but in ninety-nine cases out of a hundred you will find his front yard full of weeds, his orange trees dead or dying, a mortgage on his property, and his children growing up ignorant and thriftless.

The prices for poultry, eggs, and butter have encouraged many farmers to increase their stock. Arizona will take all we can produce.

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DECORATION OF THE PAVILION AT THE FAIR.

The Horticultural Pavilion is admirably planned and well adapted to ornamentation; and the managers of the fair, realizing the fact that an exhibition of fruits without their natural surroundings would be a comparatively lame affair, employed a firm of house decorators to supply the lack in art which nature never neglects. They found the flora of the district ample for their needs. Nature had made no mistake. To roses of every hue, from the richest to the most delicate, now in their very abundance; to fuchsias that seem the very heart of nature pierced for beauty's sake; to heliotropes that daily drink the glad sunshine in a clime that is never forgotten by that author of beauty; to jessamines, and daphnes, and carnations; to all the flowers of milder climates, magnolias, the cream of all the earth, have nobled themselves; towering palms have assumed their place, and the most of trees are evergreen.

With these trophies of nature the artists decorated the pavilion. On the front of the stage, in a semicircular form, was arranged the display from the exotic gardens of Mr. Louis J. Stengel, of Los Angeles. A collection from the gardens of Mr. Rudolph Weinhold, of the same place, was artistically grouped around the central fountain.

Mr. Stengel showed twelve varieties of fern in one window ornament of exquisite design, and on either side of his exhibit tree ferns, over six feet in height, spread their umbrella-like fronds above their more fragile neighbors with stately grace. A brilliant display of foliage plants and cut flowers arranged against a background of dark green, made the rear platform one of the decorative features of the exhibition. On the wall above the stage a cereal display was arranged with unique beauty. Monster banana trees hid the pillars supporting the gallery, and in the spaces between were suspended hanging baskets of outdoor plants, which, in colder climates, would be esteemed a rare luxury, to be produced only by artificial means. Flags and banners of various nations softened the outlines of the room, and festoons of oranges and limes tastefully arranged, and bouquets of cut flowers everywhere, completed the floral decorations.

But the whole exhibition was ornamental. The brilliant colors of the fruits of the season, arranged with care in some cases, in others thrown together promiscuously, was wonderfully beautiful. Standing near the entrance to the hall, a gentleman from New York remarked that if the exposition could be transplanted to New York city, it would be thronged for weeks by people eager to study the development of this country, and delighted with the result.

The central fountain and basin, crowded with cups of all sizes and sizes, added to the picture, while pumpkins, squashes, and beets, grapes, cheese, and wheat; ladies' fancy work, furniture, and paintings completed the beauty of the scene.

To fully understand it, one must have seen the whole display. Photographs which have been taken of different sections will be of service in preserving the picture, and those who have not been so fortunate as to have a view of the reality, must content themselves with the stereoscope.

The displays made by professional florists in this exhibition bear a different relation to public interest from that borne by similar displays in colder climates. There the florist shows what may be done by a favored few who have unlimited means at their command. Here he shows the possibilities within the reach of thousands of beauty-loving men and women. In the private collection of roses displayed by Mrs. Rosenbaum, of Pasadena, were fifty-two named varieties. Mr. Stoppel showed eighty-two varieties of roses in bloom. Of the one hundred and ten new and rare plants exhibited by the latter, nearly all are suitable for garden culture, and even then the possibilities of California in that direction are practically undeveloped. Four years ago the writer was told that foliage plants of certain varieties were a failure in this locality. This year eighty-six varieties of this valuable addition to artistic lawn ornament were displayed in the Pavilion.

At the left of the entrance, Weinhold's exhibit of medicinal plants suggested an industry which will sooner or later become a feature of Southern California. In the collection of the last named florist we noticed a *Papyrus antiquorum*, the paper plant of the ancients, and specimen plants of the *Pyrethrum Parvarum*, from which the famous Persian insect powder is manufactured.

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ILLUSTRATIONS (Continued.)

of goods he makes. Young and old enjoy "candy," and here we have a home establishment that meets every demand, from the five cents' worth to the furnishing of all needed confections for the grandest wedding. In addition to the manufacture of confectionery, Mr. Merriam can furnish to order the finest of all kinds of "pastries," etc., in the shortest time. Merriam's "lunch rooms" are a favorite resort for our citizens who want a "nice lunch" at a reasonable price. Altogether Merriam's is the "Bon Ton" of the city.

Miss L. J. Hammond, "The Milliner," is "noted" for her styles, and taste in selecting a "chicken of a bonnet," and keeping up with the fitting fashions.

D. C. Roberts and C. C. Tomlinson occupy the next room, and are always busy, and of whom we hope to speak in the future.

Chief of Police Kern's sign adorns the next door, the temporary abode of "go vagabond;" also the council rooms of our city dads. We might speak of the merits of the individual members of our council, but it seems the "political machine" has to grind out city guardians instead of the people interested meeting together and choosing the men who would best serve the interests and welfare of our city. We have not a word to say against the present council and their appointees; on the contrary, we believe they are good and efficient men, and if the "machine" will do as well in the future, we hope she will continue to run.

On the corner we have the Bank Saloon, convenient to the court house, as well as all passers-by. So endeth Central Block, until the demand shall cause a second story to be added; of which we believe the time is now.

In the hands of the present managers we leave the suggestion, knowing they fully appreciate the situation of affairs and will do what is the best from a financial standpoint as well as a public improvement.

TID-BITS.

[illegible]

EXTRA DOUBLE NUMBER.

The Christmas issue (January 1881) of this paper will be a double number of thirty-six pages,

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with cuts of all the residences, buildings, &c., that have appeared in pages of our paper during the past year.

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LOS ANGELES.

Poultry.

TO MAKE HENS LAY.

An exchange gives the following prescription: Put two or more quarts of water in a kettle and one large red pepper, or two small ones. Then put the kettle over the fire. When the water boils, stir in coarse Indian meal until you have a thick mush. Let it cook an hour or so. Feed hot. Horse-radish chopped fine and stirred into mush, as prepared in the above directions, and for results we are getting from five to ten eggs per day, whereas previous to feeding we had no eggs for a long time. We hear a good deal of complaint from other people about not getting eggs. To such we would warmly recommend cooked feed, fed hot. Boiled apple skins seasoned with red pepper, or boiled potatoes seasoned with horse-radish, are good for feed—much better than uncooked food. Corn, when fed to the hen by itself, has a tendency to fatten, rather than to produce the more profitable egg-laying. A spoonful of sulphur stirred with their feed occasionally, will rid them of vermin and tone up their system.

EGG PRODUCTION IN AUTUMN.

Give the beginners the best fowl to be obtained, and there will be little complaint about eggs. The quality, quantity, and size are satisfactory. Not one person in ten knows how to feed fowls, or to give the treatment they deserve. Farmers in general do not get the full benefit of the fowls they keep about them. Too often they tolerate them instead of keeping them. For the money invested, a hen pays as large a profit as a cow.

Milk as Food.—The *New England Farmer* thus expatiates on the value of milk as food, and yet one of the anomalies of American farm-houses is to frequently find the whole family using coffee three times a day at meals. Milk is a perfect hot-weather food. It is, in fact, a perfect human food for any season, for any climate where it can be used before it changes, and for persons of all ages, young or old. All authorities on the subject of foods place it at the head of animal substances for this purpose, and Dr. Lethebe says it is "the type or standard of a perfect food," and Dr. Edward Smith, one of the latest authorities on this subject, writes: "Milk is one of the most important foods which nature has supplied for the use of man, since it contains all the elements of nutrition within itself, and in the most digestible form." From many sources we might multiply testimony of this nature, but it would not be new—it would not be more convincing than those given.

To fatten fowls, cooked cornmeal and potatoes served to them in regular meals for three or four weeks immediately prior to slaughtering is good a regimen as can be given, and this is quite as economical a standard feed as they can have.

The Popular Road to Wealth.—The popular notion with those who know nothing about poultry keeping is, that it requires no special knowledge or skill to carry on the business successfully. This is an erroneous opinion. Successful poultry keeping on a large scale will require not only native ability of a high order, but much experience, and intimate knowledge as well. It will also require capital, labor, and room. These considerations probably do not enter the calculations of the speculators. Poultry keeping on a large scale is not impossible, but circumstances make it impracticable in most cases. Those who have means enough to undertake it, have not the inclination, while most of those who have the inclination, and are "full of it," lack the means and requisite skill. Many things may be learned in a modest-sized establishment, and our advice is to try what can be done in a small way first, and let the business grow by natural degrees.—*N. E. Homestead.*

Many of those who attempt the raising of flowers in pots make a fatal mistake at the very foundation, in the selecting of the soil. Many use a soil which is too compact to allow water to pass freely through it, and the plants soon become water-logged. The soil should be porous enough to admit of the free passage of water, and yet not so open as to dry up. A pile composed of equal parts of partially decayed sods, manure, and wood loam, will, when thoroughly decayed, make the best possible soil for plants.

A DESIRABLE BUSINESS.

There is both satisfaction and remuneration in the business of poultry breeding. When the work is performed with system and intelligence the steady worker will be gratified, and, for the amount of labor required, will find himself (or herself) amply rewarded by the product returned. But little capital is required to start a hennery; if the intention is to raise fancy stock, for the purpose of furnishing eggs to breeders, small quarters and a few fowls of pure breeds will do to begin with. In a single year the amateur may raise sufficient numbers to stock his yard to advantage.

On the other hand, if the desire be to supply the eggs and chickens for market, a cross of any of the larger varieties with common fowls will prove very satisfactory. This branch of the industry will require more room and closer attention to the smaller details. There is no difficulty in making this business a profitable one, if it is undertaken in the spirit that is required to make any creation a success. For fancy stock only the pure breeds can be used, and these should be carefully bred in succession and strictly by themselves. Care must be used each year as the flocks increase, to select from among them the best hens for layers, and the finest cocks for sires.

If you would grow *poultry for profit*, subscribe for this paper. We have good writers for this department, and it will pay every man or woman who keeps a dozen chickens to have the Semi-Tropic in the house.

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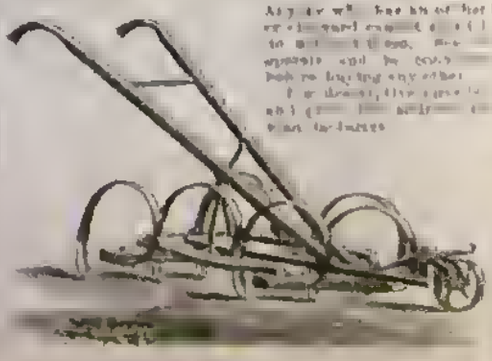

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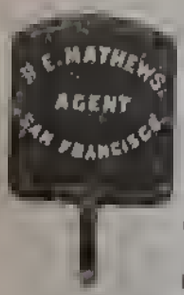

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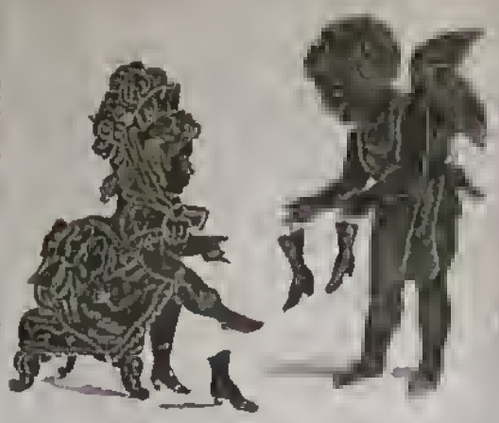

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